Issue 157
PS
1965 Series
THE PREVENTIVE MAINTENANCE MONTHLY
UNFAIR TO USERS
NO RELIABILITY IN WORKMANSHIP
TOYS DON'T HAVE QUALITY MAINTENANCE
SLIPSHOD CONSTRUCTION REPAIR AND MAINTENANCE IS RUINING XMAS
WE WANT ZERO DEFECTS
S. Claus
Will Eisner

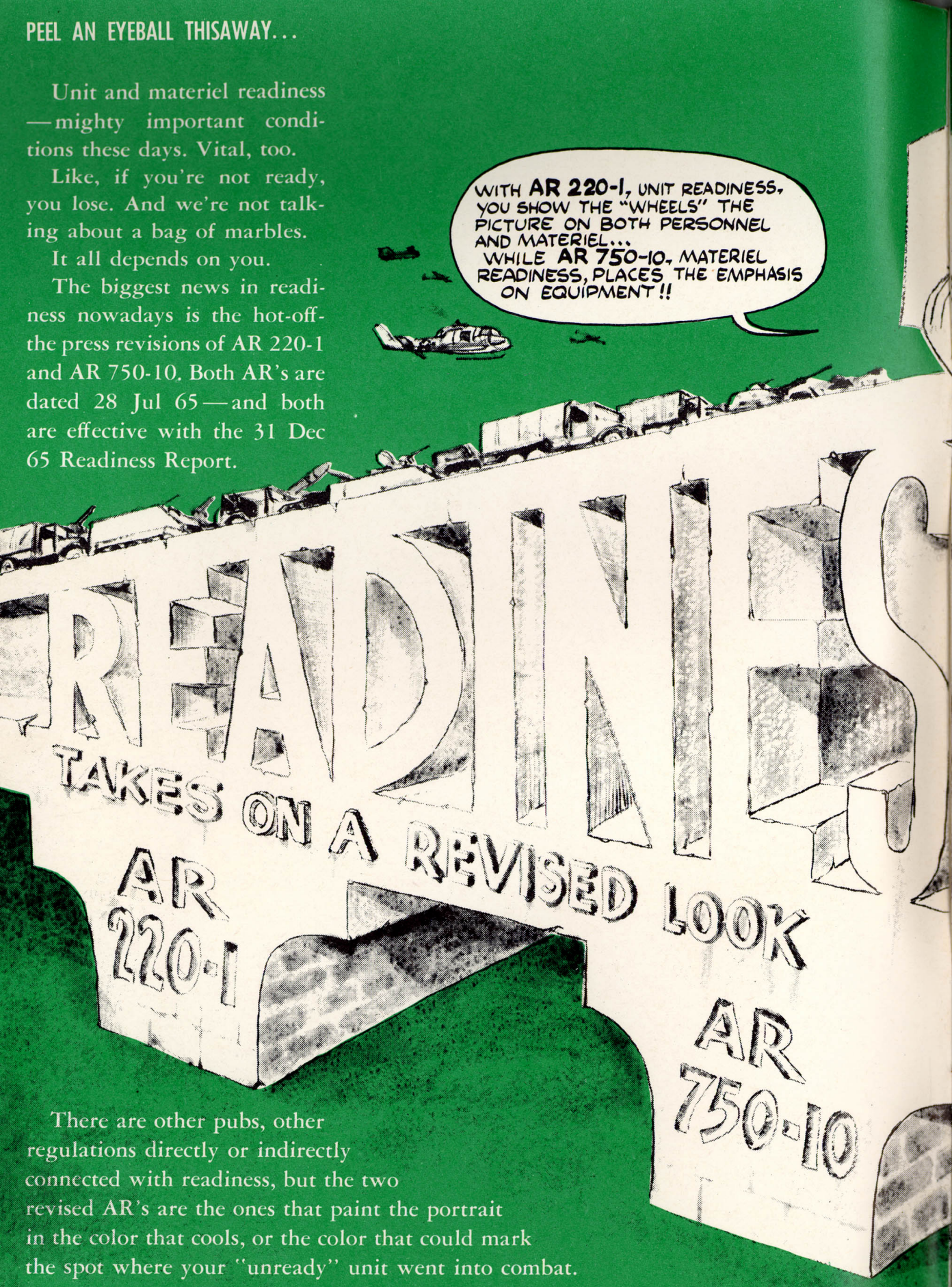
PEEL AN EYEBALL THISAWAY...

Unit and materiel readiness —mighty important conditions these days. Vital, too.

Like, if you're not ready, you lose. And we're not talking about a bag of marbles.

It all depends on you.

The biggest news in readiness nowadays is the hot-off-the press revisions of AR 220-1 and AR 750-10. Both AR's are dated 28 Jul 65—and both are effective with the 31 Dec 65 Readiness Report.



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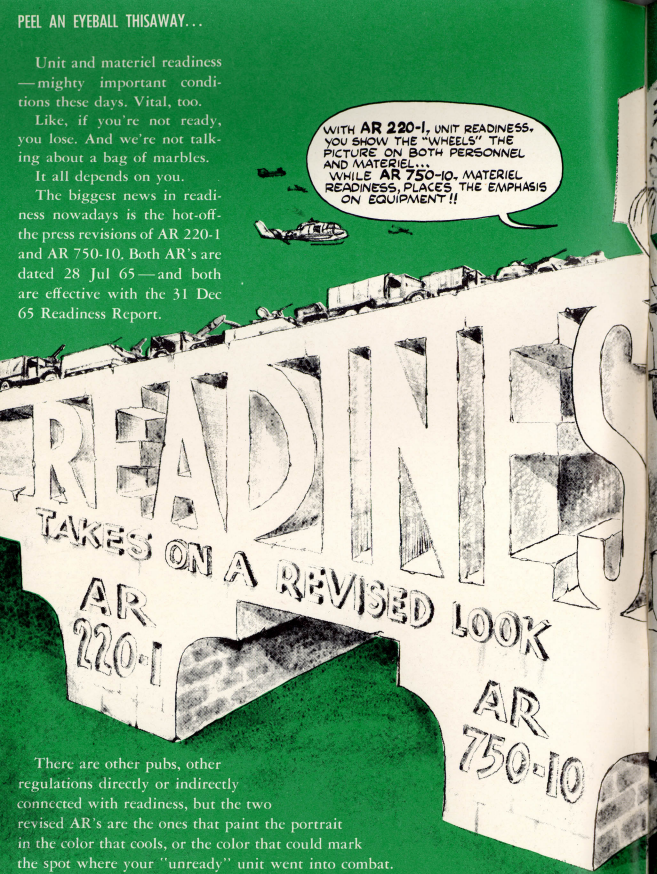

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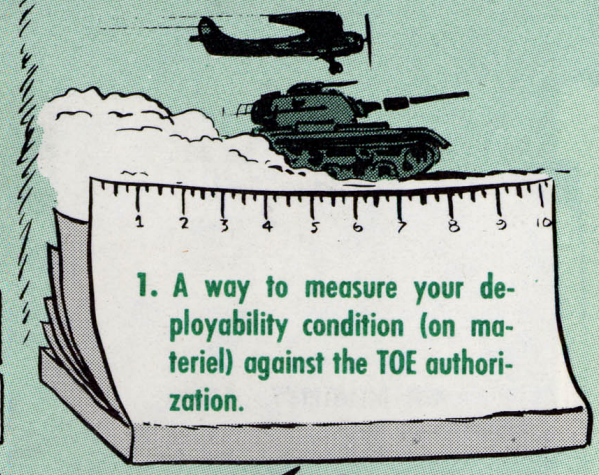
AR 750-10 NEW!



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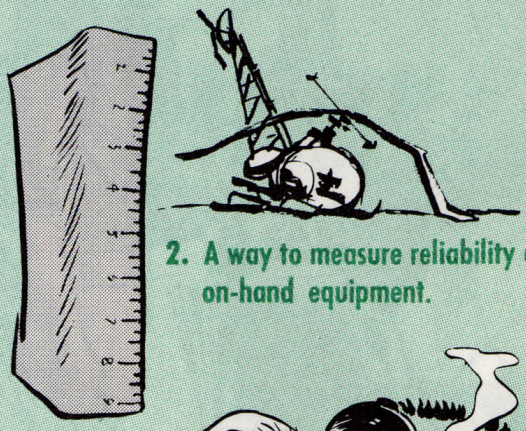

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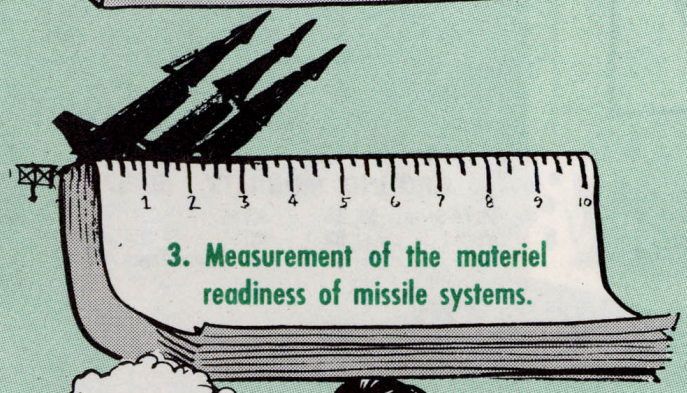

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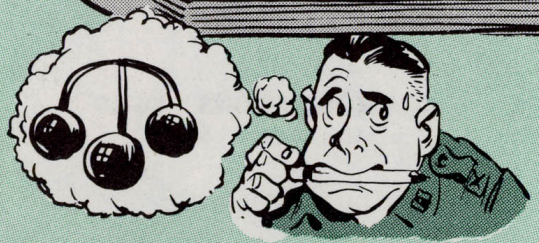

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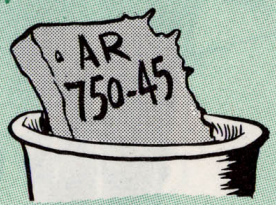

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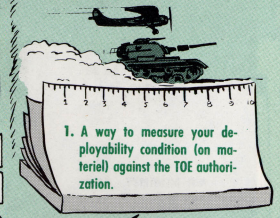

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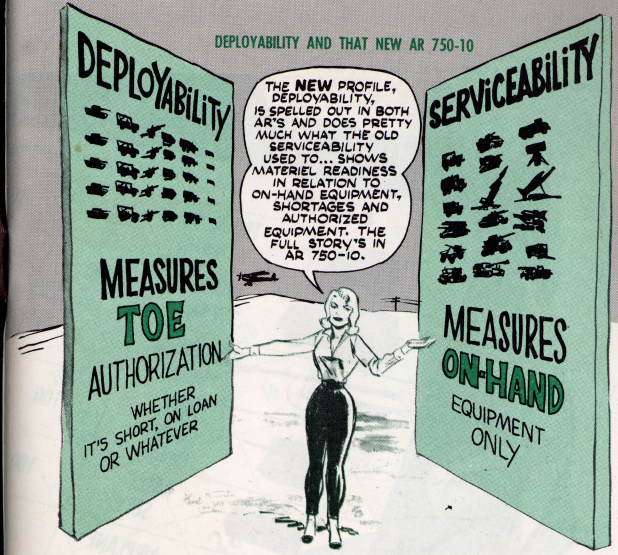

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Now, the Serviceability Profile points the big finger at the local CO . . . or away from him . . . not as a disciplinary measure, but as pinpointing an area that needs attention (either as a local problem or one needing action at a higher level).

Way back when, things got tough for a CO with just one profile to explain or not explain the healthy percentage of his equipment which was on loan, or short, limited standard or obsolete.

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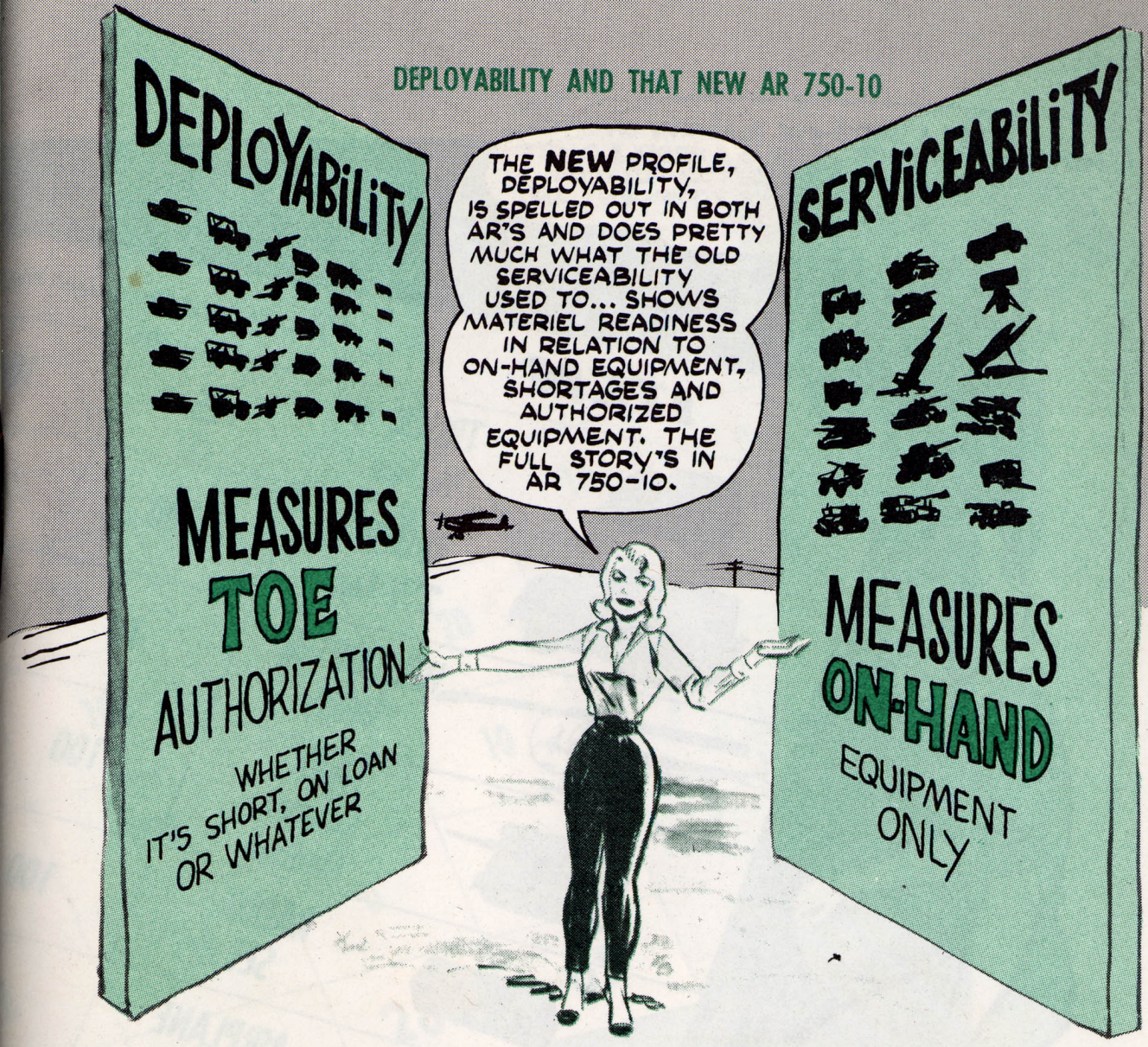

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...FOR A BIRD'S-EYE RUNDOWN ON **HOW IT WORKS**... THIS IS A PROFILE CHART ON A UNIT EQUIPMENT COMPUTATION. (THESE PERTAIN TO UNLIKE EQUIPMENT AND ARE USED IN AR 220-1).

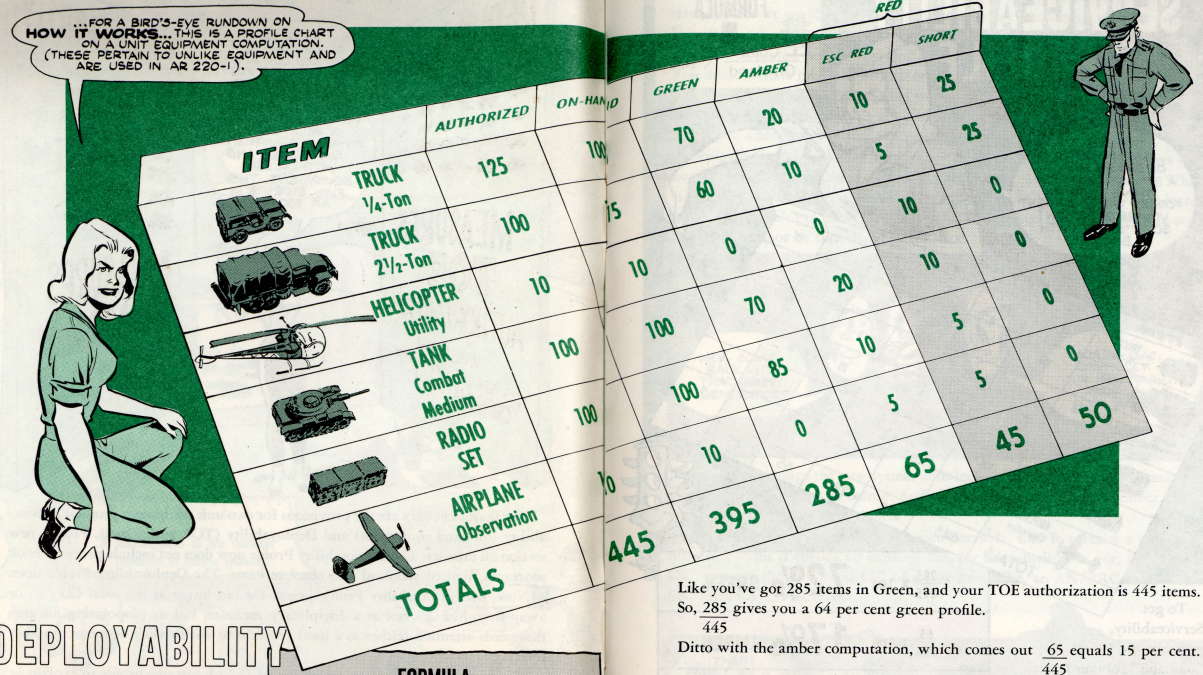
ITEM	AUTHORIZED	ON-HAN
TRUCK 1/4-Ton	125	100
TRUCK 2 1/2-Ton	100	
HELICOPTER Utility	10	
TANK Combat Medium	100	
RADIO SET	100	
AIRPLANE Observation		
TOTALS		

DEPLOYABILITY PROFILE

(Remember: Deployability computation for RED includes ESC score, plus shortages, plus on-loan equipment not returnable in 24 hrs.)

FORMULA

Deployability Profile = $\frac{\text{Color}}{\text{TOE Authorized}} \times 100$



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$$\text{Deployability Profile} = \frac{\text{Color}}{\text{TOE Authorized}} \times 100$$

Like you've got 285 items in Green, and your TOE authorization is 445 items. So, $\frac{285}{445}$ gives you a 64 per cent green profile.

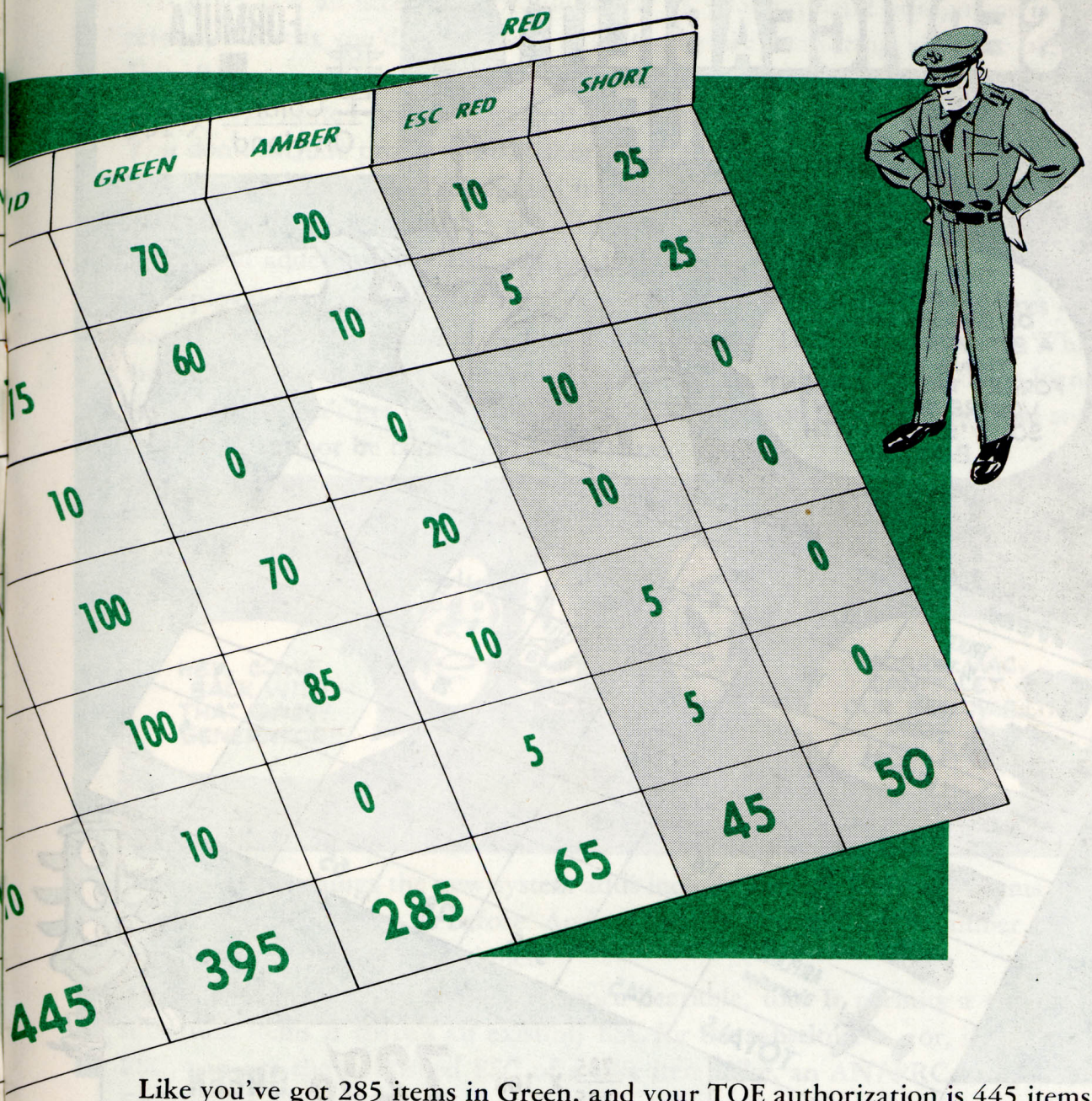
Ditto with the amber computation, which comes out $\frac{65}{445}$ equals 15 per cent.

However, comes the killer via the red column.

Notice that you pick up the 45 red-scored items, but, for Deployability, you also pick up the 50 short items and add them to the red column.

This gives you a formula like so: $\frac{95}{445}$ or 21 per cent in the red. Using the six-digit profile, as spelled out in the AR, you come up with a Deployability reading of 641521. Which is nothing to write home about.

MORE



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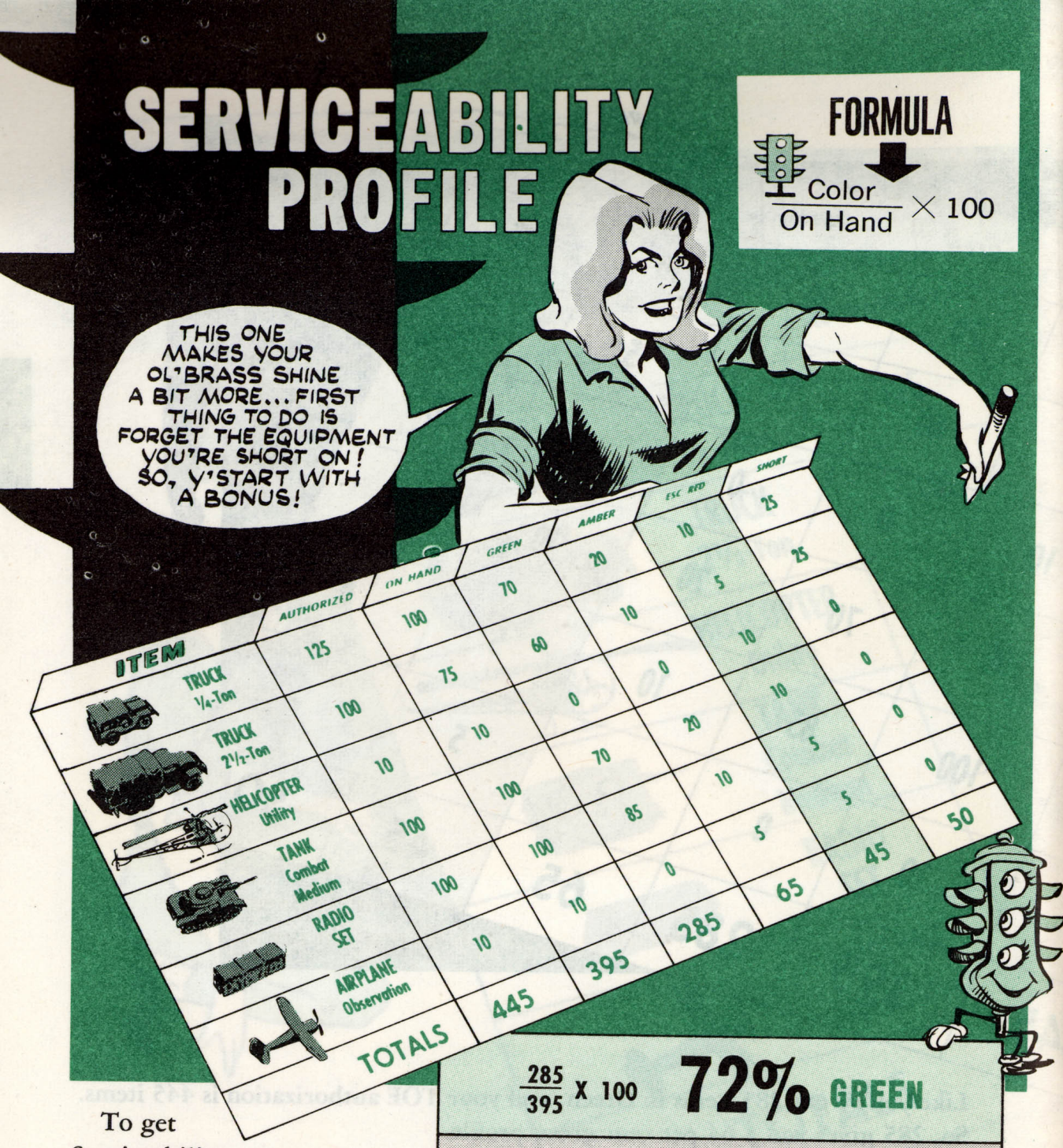
SERVICEABILITY PROFILE

FORMULA

$$\frac{\text{Color}}{\text{On Hand}} \times 100$$



ITEM	AUTHORIZED	ON HAND	GREEN	AMBER	ESC. RED	SHORT
TRUCK ¼-Ton	125	100	70	20	10	25
TRUCK 2½-Ton	100	75	60	10	5	25
HELICOPTER Utility	10	10	10	0	10	0
TANK Combat Medium	100	100	0	0	10	0
RADIO SET	100	100	70	20	10	0
AIRPLANE Observation	10	10	100	85	5	5
TOTALS	445	395	285	0	65	45

$\frac{285}{395} \times 100$ **72% GREEN**

$\frac{65}{395} \times 100$ **17% AMBER**

$\frac{45}{395}^{*} \times 100$ **11% RED**

*IGNORE THE 50 SHORT ITEMS

To get Serviceability, you take the 395 "on-hand" column figure, put your 285 green-scored column over it and come out smelling like a rose, like so:

Where you make out is the red percentage. Like, ignoring the 50 short items completely, you put your 45 red items over the 395 on-hand items and come out with 11 per cent in the red.

This gives you a six-digit profile of **721711**

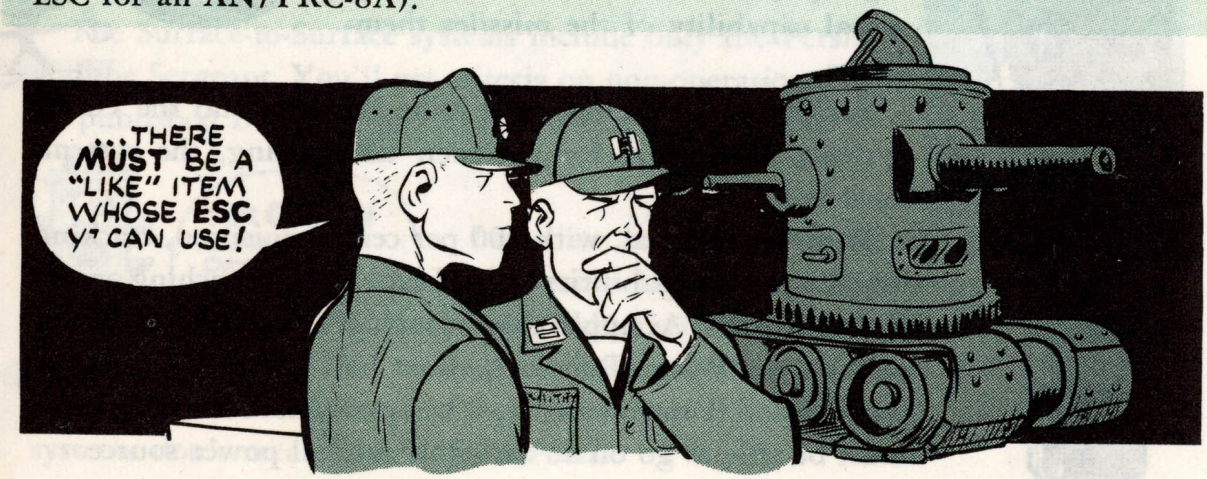
It gives you an acceptable profile so far as your on-hand equipment is concerned, whereas you'd be skunked out if you were measuring with the old AR 750-10.

Like was hinted before, Serviceability Profiles are a balm to ease your pain. You don't include property book shortages of equipment, and limited standard and obsolete items are not included in the profile. However, if you've loaned out an accountable item and can't get it back within 24 hours, it has to be counted as red and added to your ESC red total.

Deployability, on the other hand, considers all conditions — and measures your materiel readiness condition to be deployed under TOE authorization. Which means all TOE shortages count against your rating, including those items loaned out that you can't get back within 24 hours. Items you have on loan from some other unit cannot be considered as on hand.

Some of the things the new system adds include limited production items, plus Standard A, B, C items as before. And, as before, you can get an amber rating with Standard C — but no higher.

The note in para 6b makes life more bearable, too. It permits a profile on substitute items if there's an existing ESC for the substitute . . . or, if there's no ESC, you use the published ESC of a like item (like, an AN/PRC-8 radio set's ESC for an AN/PRC-8A).



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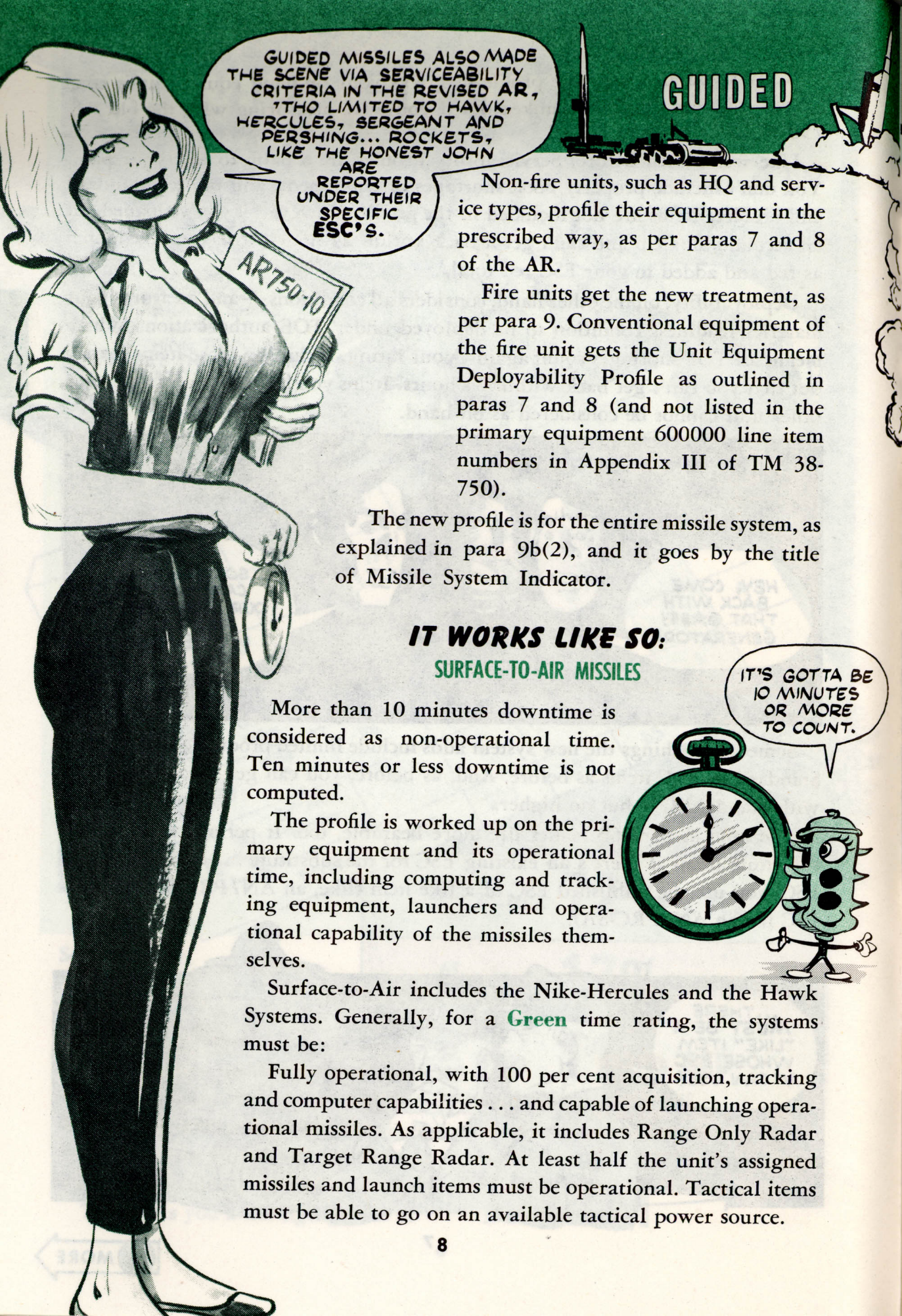


Non-fire units, such as HQ and service types, profile their equipment in the prescribed way, as per paras 7 and 8 of the AR.

Fire units get the new treatment, as per para 9. Conventional equipment of the fire unit gets the Unit Equipment Deployability Profile as outlined in paras 7 and 8 (and not listed in the primary equipment 600000 line item numbers in Appendix III of TM 38-750).

The new profile is for the entire missile system, as explained in para 9b(2), and it goes by the title of Missile System Indicator.

IT WORKS LIKE SO:

SURFACE-TO-AIR MISSILES

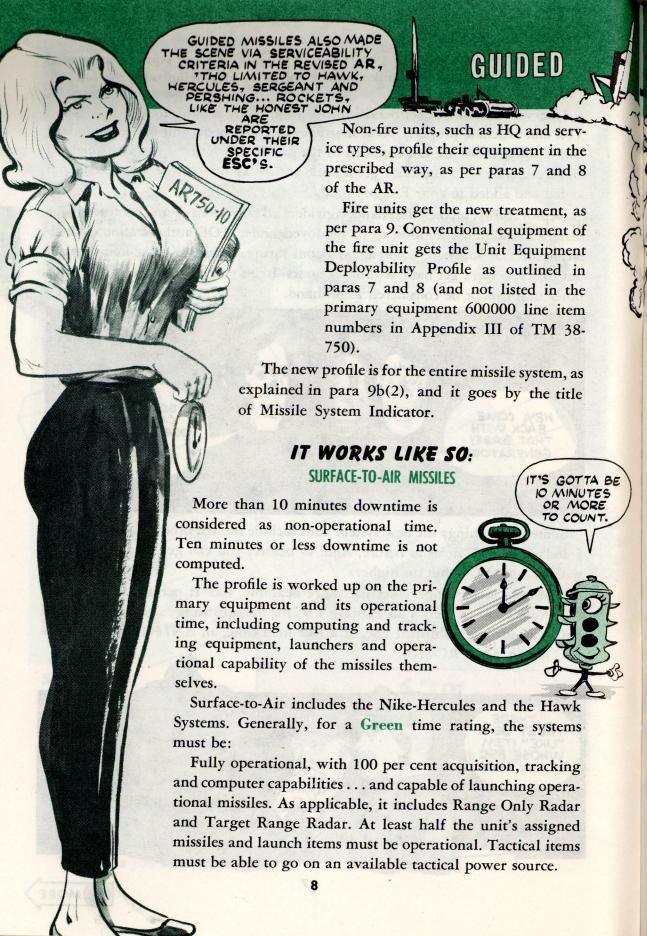
More than 10 minutes downtime is considered as non-operational time. Ten minutes or less downtime is not computed.

The profile is worked up on the primary equipment and its operational time, including computing and tracking equipment, launchers and operational capability of the missiles themselves.

Surface-to-Air includes the Nike-Hercules and the Hawk Systems. Generally, for a **Green** time rating, the systems must be:

Fully operational, with 100 per cent acquisition, tracking and computer capabilities . . . and capable of launching operational missiles. As applicable, it includes Range Only Radar and Target Range Radar. At least half the unit's assigned missiles and launch items must be operational. Tactical items must be able to go on an available tactical power source.

GUIDED MISSILE UNITS



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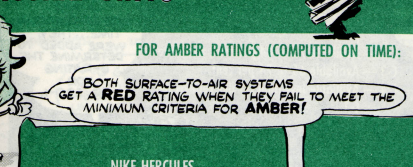

NIKE-HERCULES

a. At least one acquisition capability 100 per cent operational.
b. Computing and tracking capability 100 per cent operational.
c. One target tracking capability 100 per cent operational.
d. 50 per cent of launchers, launcher control and associated materiel operational.
e. 50 per cent of assigned missiles operational and capable of being launched.
f. An operational tactical power source.

HAWK

a. CW acquisition radar 100 per cent operational.
b. Either BCC or AFCC 100 per cent operational.
c. One of the illuminators 100 per cent operational.
d. 50 per cent of launchers and associated materiel operational.
e. 50 per cent of assigned missiles of operational and able to be launched on above operational equipment.
f. An operational tactical power source.

Like you know, there are alternate methods of operating the missile system to knock down a target. The necessity is obvious. So, ratings are computed on the whole system, and not just one piece of equipment. Amber means you can knock down a target even though **all** capabilities are not 100 per cent operational, thanks to the built-in additional capabilities. The above cited Amber computed ratings, for Nike and Hawk systems, are the minimum requirements

SURFACE-TO-SURFACE MISSILES

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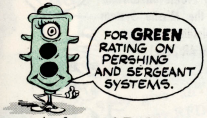


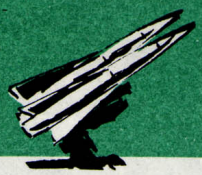
Launcher and all other missile system ground equipment is 100 per cent operational.

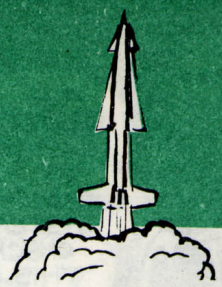
Assigned missiles are 100 per cent operational and can be launched on above equipment.

Amber and **Red** criteria are simple. There is no **Amber**, profile is **Red** if the systems don't meet criteria for **Green.**

MORE

MISSILE UNITS





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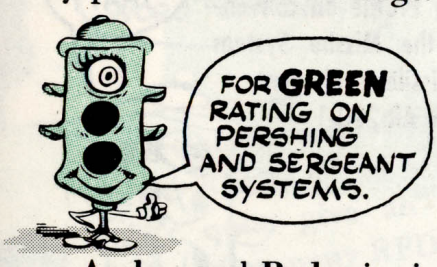

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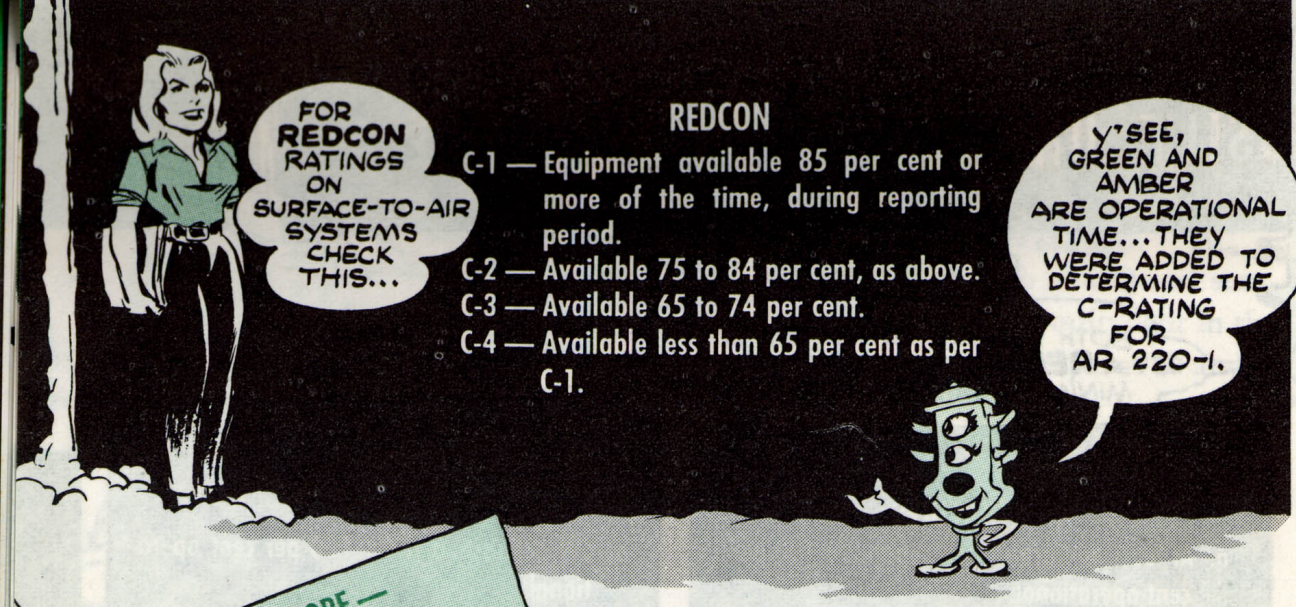


A FEW MORE—

Final points on AR 750-10 before going on to Unit Readiness reports:

A new portion, Section II, has been added. It makes with some mighty helpful info on reporting under AR 220-1. Also, 750-10 rescinds AR 750-45 (9 Mar 62).

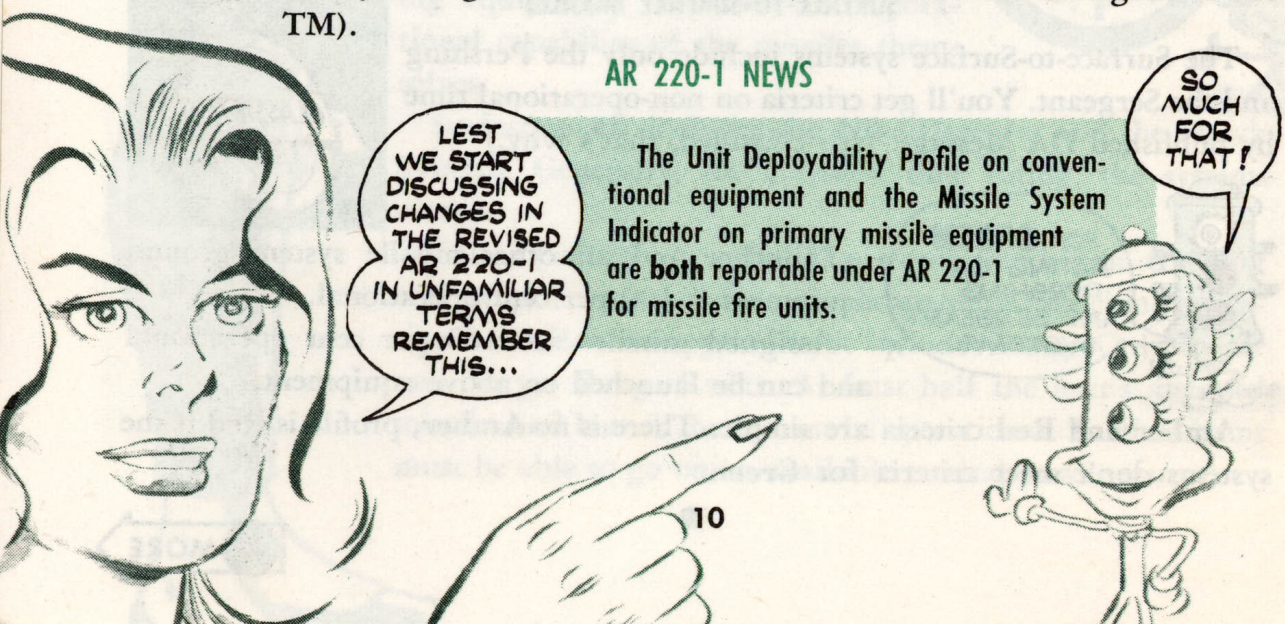
Under the AR, if you've got a complete system with one or more complete sub-systems on it (say a quarter-ton truck with a radio set), the complete system can be rated only as high as its lowest-rated subsystem.

Note: Fixed air defense installations (such as ARADCOM) **must** report the Missile System Indicator profile, but the installations don't have to report on conventional equipment under AR 750-10 . . . because of the nature of the equipment and the assigned mission.

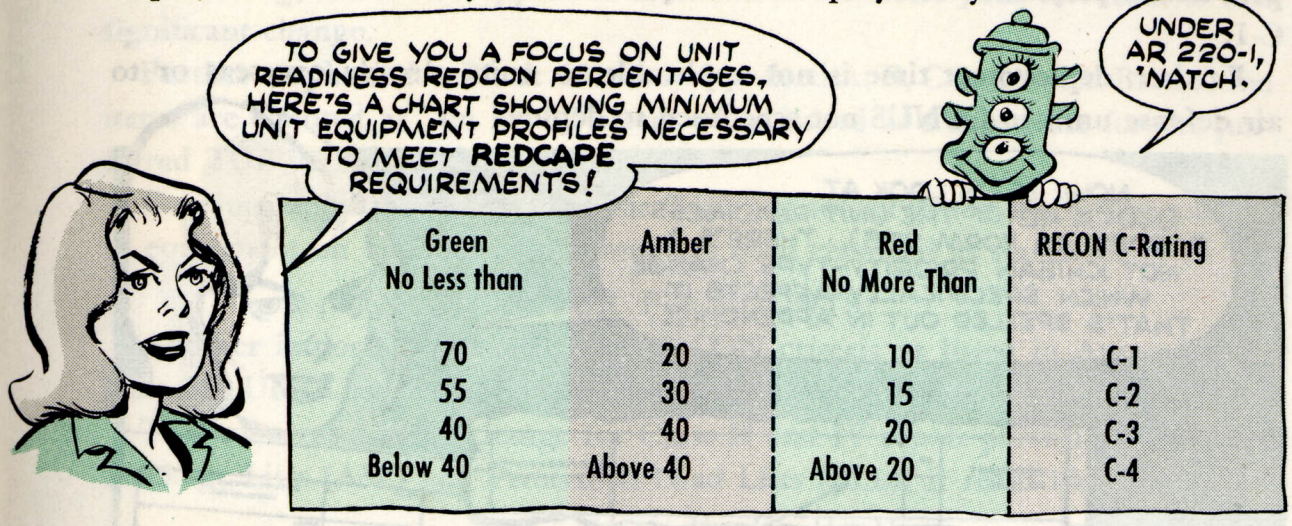
Because of the definitions of **reportable items**, on-hand items, authorization documents and other differences between TM 38-750 and the revised AR-750-10, neither the serviceability profile nor the deployability profile will give you the same picture as the serviceability listing on DA Form 2406 (not even under Change 2 to the TM).

AR 220-1 NEWS

The Unit Deployability Profile on conventional equipment and the Missile System Indicator on primary missile equipment are **both** reportable under AR 220-1 for missile fire units.



One of the first changes you'll find in the revised AR 220-1 is in para 2e. Described there is readiness condition, actual level of readiness of a unit . . . and the clarification that REDCON C-1 is the desired condition for deployment or employment . . . under your new friend, the Deployability Profile.



Green No Less than	Amber	Red No More Than	RECON C-Rating
70	20	10	C-1
55	30	15	C-2
40	40	20	C-3
Below 40	Above 40	Above 20	C-4

(Paras 7 and 8 of AR 750-10 show you how to arrive at the above percentages).

To determine your rating, you've got to meet or go over the minimum percentage for Green, and meet or score less than the maximum for Red.

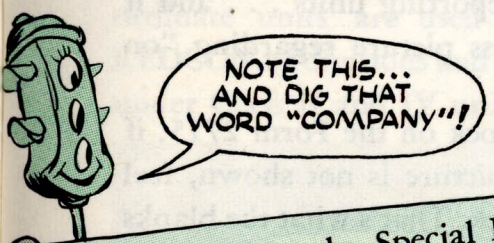
F'rinstance, you can't go below 70 Green and higher than 10 Red and get a C-1.

If you had a 75 Green, 13 Amber and 12 Red, you'd get a C-2. Your 12 Red did you in, since it's 2 more than allowed under C-1.

Clear? Good. Onward . . .

There's a whole new section (para 2f) on Full TOE Strength and Authorized Strength (para 2g) which'll pay you to eyeball. It'll help you to use para 4, on Criteria.

In para 4, it's noted that personnel, equipment and deployment time are the criteria indicators for REDCAT and REDCAPE. **Full** TOE strengths are the basic standards for TOE units, and **authorized** strengths are the standard for TD units.



Para 4a now requires that each on-site air defense unit and Special Forces units will be recommended for REDCAT-REDCAPE by individual lettered battery or **company**.

Previously, Special Forces reported REDCON by Group. It didn't quite give an accurate picture. **Company** REDCON reporting pinpoints the problem areas and responsibilities.

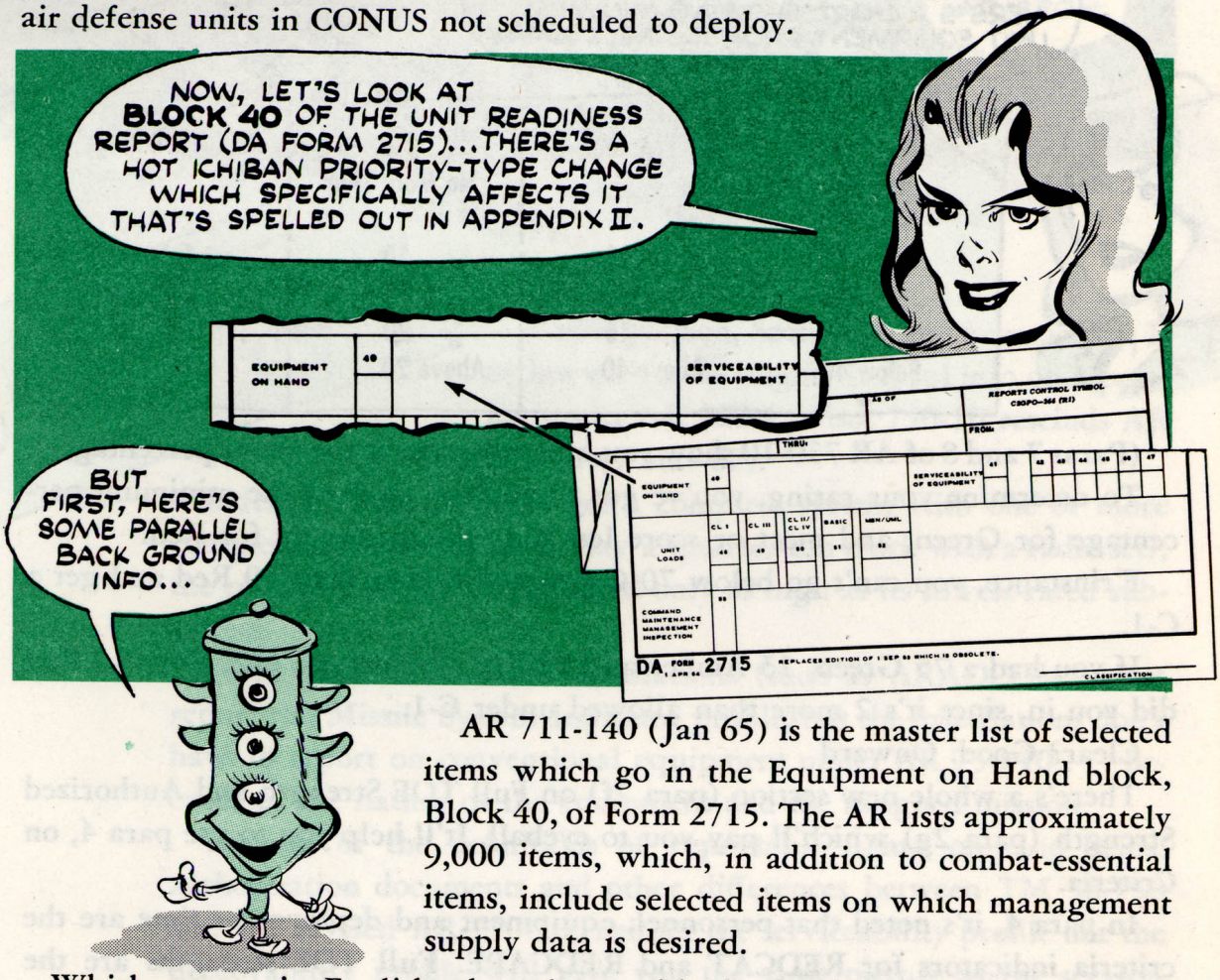
If yours is a medical unit, or your responsibility is a medical unit, flick an eyelash at some new dope which starts at para 4f. It fills you in on determining the REDCON of those units.

P.S. MORE

NEW . . . Note 4 of Appendix I, REDCAT and REDCAPE, is a new item which answers an old question or three.

Namely, it says that units with no mission deployment requirement can interpret unit deployment time as the time required for the unit to attain REDCON C-1.

Further, deployment time is **not** applicable to units already overseas or to air defense units in CONUS not scheduled to deploy.



AR 711-140 (Jan 65) is the master list of selected items which go in the Equipment on Hand block, Block 40, of Form 2715. The AR lists approximately 9,000 items, which, in addition to combat-essential items, include selected items on which management supply data is desired.

Which means, in English, that along with the hard-core mission essential items, many of the 9,000 are relatively unimportant TOE items.

That was a real administrative back-breaker for reporting units . . . and it could possibly distort your outfits' materiel readiness picture regarding "on hand" assets.

Concerning Block 40, or any other appropriate block on the Form 2715, if the reason for a condition is not shown, or the true picture is not shown, feel free to elaborate in the adjoining blank space to the block. That's what the blanks are there for.

WATCH CODE 1

The AR 711-40 list was trimmed to "Shoot, Scoot and Communicate" items, and the 9,000 lines shriveled to about 1,700. The resulting 840 generic items are now the Code 1 items of AR 711-140.

They also are published in DA Cir 711-2 (dated 22 Jul 65).

Purpose of the 840 items, naturally, is to provide a more meaningful basis for computing the "Equipment on Hand" of Block 40, Form 2715.

Footnote g, on Line 7, Appendix II of AR 220-1 steers your attention to this significant change.

Further emphasis for Block 40: Only Standard A, B, C or Limited Production items are counted as "on hand" assets when issued as a substitute for the preferred TOE item.

Developmental items, listed on the TOE but not yet issued, **cannot** be counted as equipment on hand until the item has been classified as standard.

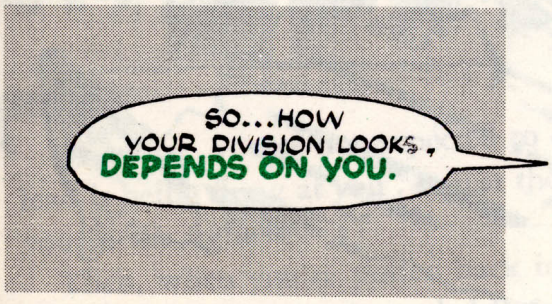
YOUR PLL COUNTS

Another important change . . . REDCON criteria as listed in Appendix II, Item 10, Unit Loads—and explained in Footnote j of the appendix.

This concerns criteria change for Class II and IV repair parts, in Authorized Stockage Lists (ASL) and Prescribed Load Lists (PLL). It reads like so:

	REDCON C-1	C-2	C-3	C-4
ASL	15 days of supply, or more, on hand	7-14 days of supply on hand	3-6 days of supply on hand	Less than 3 days of supply on hand
PLL	0-10% of authorized line items at zero balance	11-15% of authorized line items at zero balance	16-20% of authorized line items at zero balance	More than 20% of authorized line items at zero balance

The average of the REDCONs of subordinate units are used to compute the REDCON of divisions and separate brigades under Class II and IV units load PLLs . . .

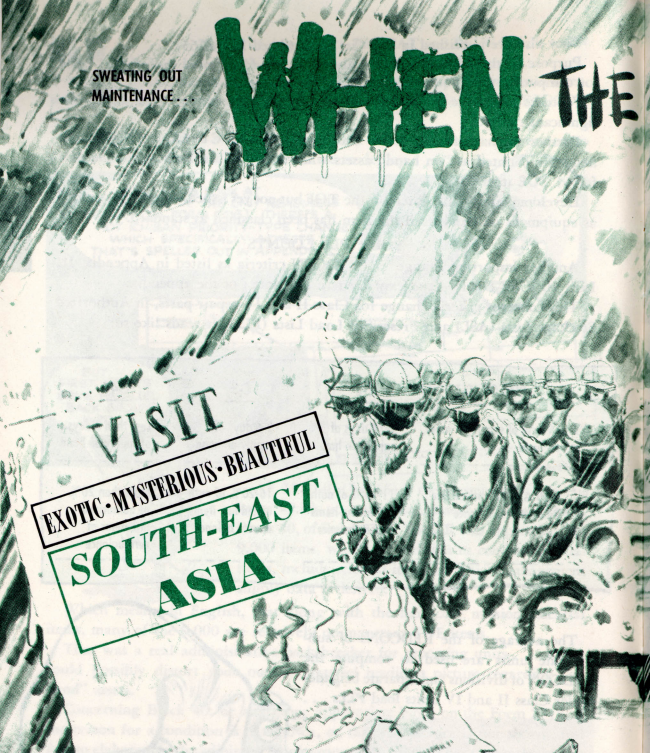


END

SWEATING OUT
MAINTENANCE . . .
WHEN THE
VISIT
EXOTIC · MYSTERIOUS · BEAUTIFUL
SOUTH-EAST
ASIA

SWEATING OUT MAINTENANCE . . .

WHEN THE HEAT'S ON



Flowers! Plenty of shade trees, Rivers, and bubbling brooks, warm sun . . . and, just to keep things growing, a gentle rain falls once-in-a-while . . .

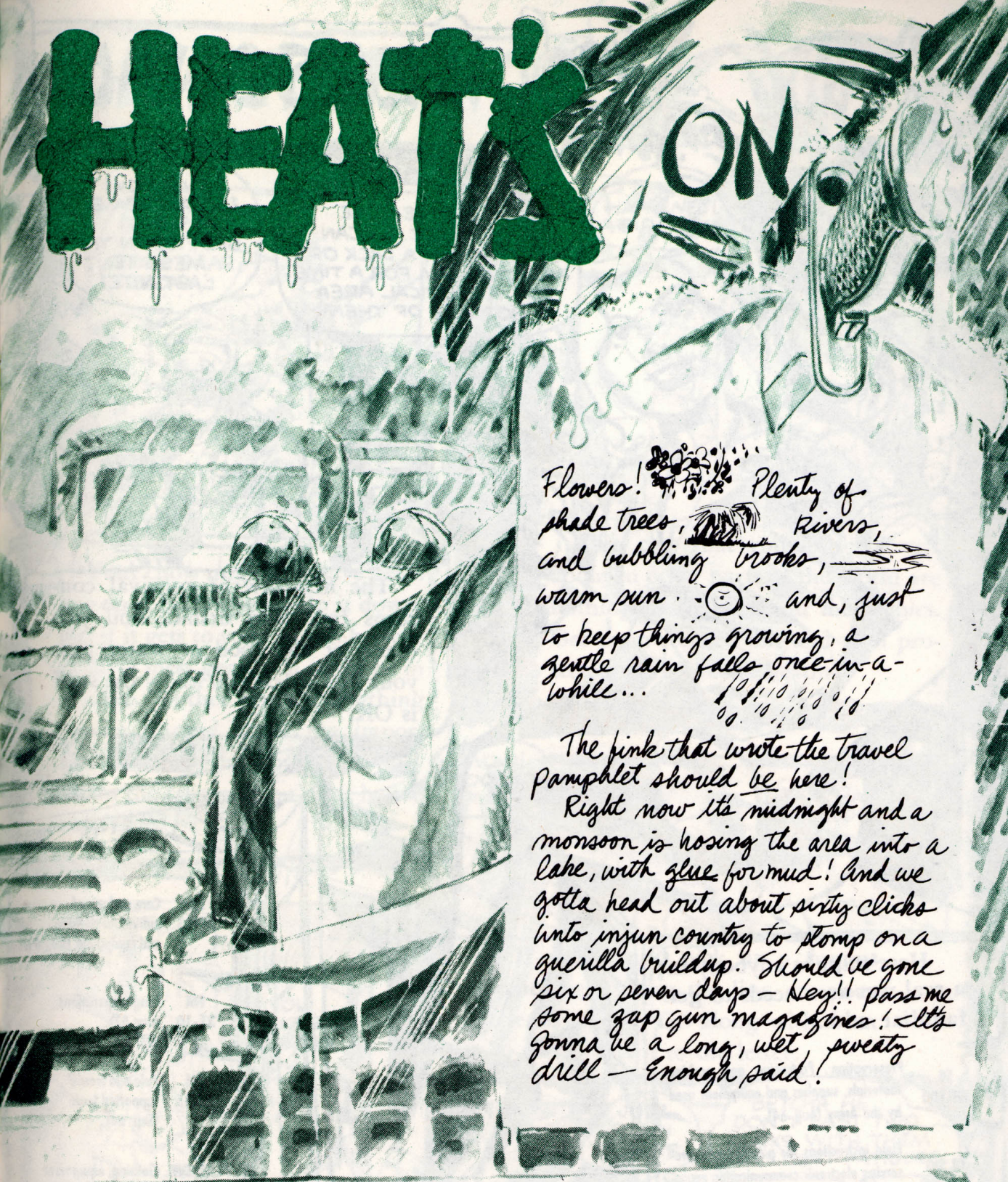
The fink that wrote the travel pamphlet should be here!

Right now it's midnight and a monsoon is hosing the area into a lake, with glue for mud! And we gotta head out about sixty clicks into injun country to stomp on a guerilla buildup. Should be gone six or seven days — Hey!! Pass me some gup gun magazines! It's gonna be a long, wet, sweaty drill — Enough said!

Of course, you're not expected to do everything you see here while unfriendly lead is being flung at you . . . just those things that have got to be done to keep you in the fight.

Then, when you're pulled back into a quieter area or before you head off for a week or two of much-needed R & R, be sure to get caught up on all of these things—and others that you'll see in your equipment's TM's.

MORE



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DS MORE

PERSONAL

The first law of survival concerns food and drink. You just don't let any food or water pass your lips unless you know the stuff is OK.

Here're pubs anybody in a real wet area needs to get familiar with.

SB 38-100	Preservation, Packaging and packing materials, supplies and equipment used by the Army (Aug 64).
TB SIG 364	Field instructions for painting and preserving electronic communication equipment (Feb 64).
SB 11-573	Painting and preservation supplies available for field use for electronic equipment (Feb 64).

FM 21-15	Care and use of individual clothing and equipment (Aug 61).
FM 31-10	Jungle operations (Aug 62).
FM 20-15	Pole and frame supported tents (Sep 64).
TB QM 13	Clothing, equipment and rations for use in jungle (Aug 61).
TB ENG 58	Field tropicalization measures for engineer materiel (Feb 45).

PERSONAL MAINTENANCE

The first law of survival concerns food and drink. You just don't let any food or water pass your lips unless you know the stuff is OK.

Your chow might not have germ one on it before you gulp it down, but if it gets to your mouth by way of dirty mess gear, you could be in trouble. In other words, everything you've learned about the importance of clean mess gear goes double in the tropics. You can't be too careful!

Skin cuts that you might forget about in other parts of the world are nothing to fool with in the tropics. Get them cleaned out and then protected while they're healing.

If you should pick up a fungus somewhere along the line, see your friendly medic. Go along with what he says—down to the letter.

You can't take a shower every hour on the hour, but shake hands with soap and say hello to water as often as you can, hitting the parts of you where the sweat flows the heaviest.

Wear only enough clothing to keep bugs, thorns and the like from your skin. And the clothing has to be loose so that air can get through to you.

MORE

MAINTENANCE

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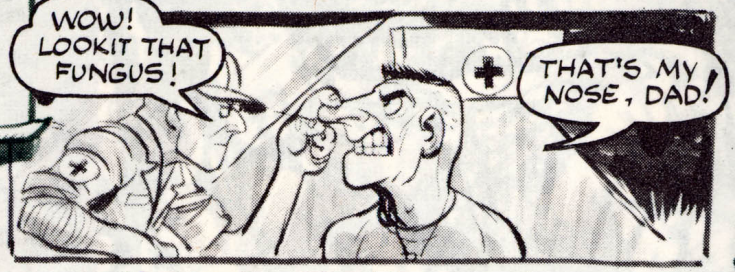

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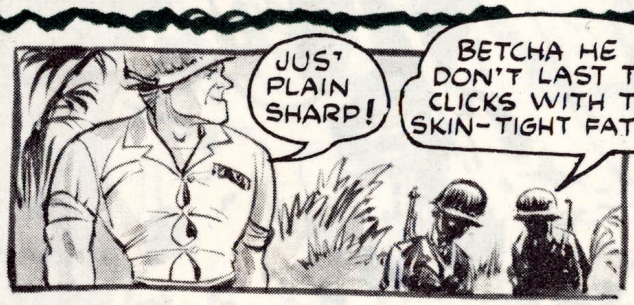


Wear only enough clothing to keep bugs, thorns and the like from your skin. And the clothing has to be loose so that air can get through to you.

P.S. MORE

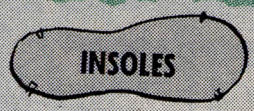
PERSONAL

CLOTHING Wash things like shirts and trousers in soap and warm mater.

Let the sun and air at them all you can . . . don't put them away while they're wet or damp . . . and repair holes and rips pronto.

Mosquito netting gets the same kind of treatment.

PONCHOS Get to rips and tears when they show up. Clean your poncho with mild soap and water, followed by a thorough rinsing. Dry it away from direct heat.



Wash the ventilating insoles used inside your boots, along with your socks, at least once a day. Soapy water is what you use, but keep the insoles away from intense heat.

Mud wants to be scraped off boots as soon as possible, with water used for the final cleaning.

Boots made of leather and canvas get dried in the shade or dim sunlight—nothing stronger.

Once the leather is dry, rub in some shoe polish or neat's foot oil.

PERSONAL EQUIPMENT MAINTENANCE

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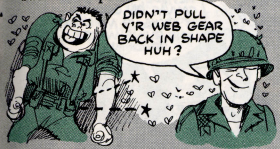
WEB EQUIPMENT Web gear, canvas bags and packs are washed in a pail of warm soapy water (mild soap) to get rid of mildew, dirt and whatnot. Follow with a clear-water rinse.

Before hanging web equipment in the shade or indoors to dry, pull it back to shape.



Damaged web equipment that you can't fix wants to be turned in for repair or replacement. Don't fool with it.

Don't mess with it unless you're usin' it . . . Y'hear!!

FIRST AID PACKET

MORE

EQUIPMENT MAINTENANCE

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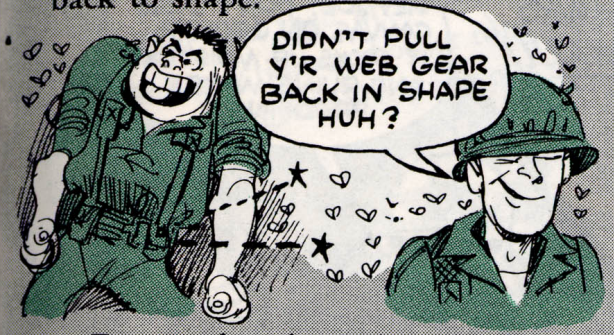

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FIRST AID PACKET

PS MORE

CANVAS

Don't fold or roll the canvas when it's wet. If you have to roll it wet, unpack the canvas the first chance you get . . . and dry it.

KEEP EYE-BALLIN' YOUR CANVAS EVERY DAY AND LOOK FOR **MILDEW**—THE STUFF THAT IS TO CANVAS WHAT RUST IS TO METAL. YOU CAN'T BEAT IT, BUT YOU CAN FIGHT IT!!

MAKE REPAIRS ***RIGHT AWAY!!*** DON'T WAIT...

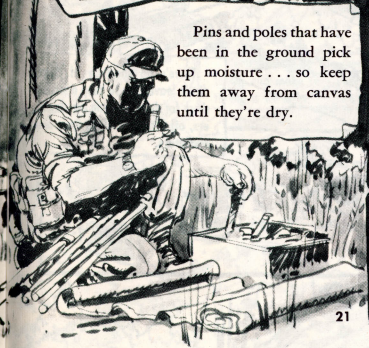
HEY JOE! DON'T DRAG CANVAS ON GROUND... IT PICKS UP MOISTURE AND RUINS WATER PROOFING.

CANVAS and other things

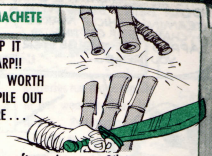
If mildew does get to your tent, work on it with a stiff brush and water. And don't dry it in direct sunlight.

Tent lines get washed in plain water and then are dried real good. And guy lines and other rope support lines are given slack when it rains—as you know.

Pins and poles that have been in the ground pick up moisture . . . so keep them away from canvas until they're dry.

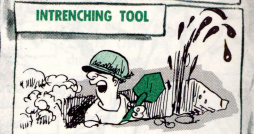


MACHETE



Dry after using . . . Oil it . . . **Don't** wrap anything around the handle or put notches in it . . . Handle pocket knives and bayonets the same way . . .

INTRENCHING TOOL



Keep the cutting edge sharp. Dry it after use and oil the nut threads . . . Don't use as an axe.

WOOL AND COTTON BLANKETS

Wash 'em in lukewarm water and mild soap . . . If you can, stretch 'em back into shape when drying . . . Air 'em out as often as you can . . .

WATERPROOF CLOTHING BAGS AND RIFLE COVERS: . . . These things get cleaned with soapy water. Holes that're not too big get patched with waterproof adhesive tape — from both the inside and outside.

MORE

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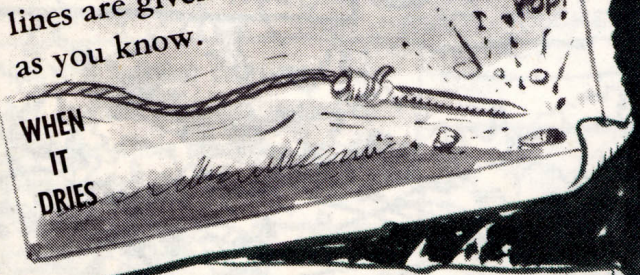

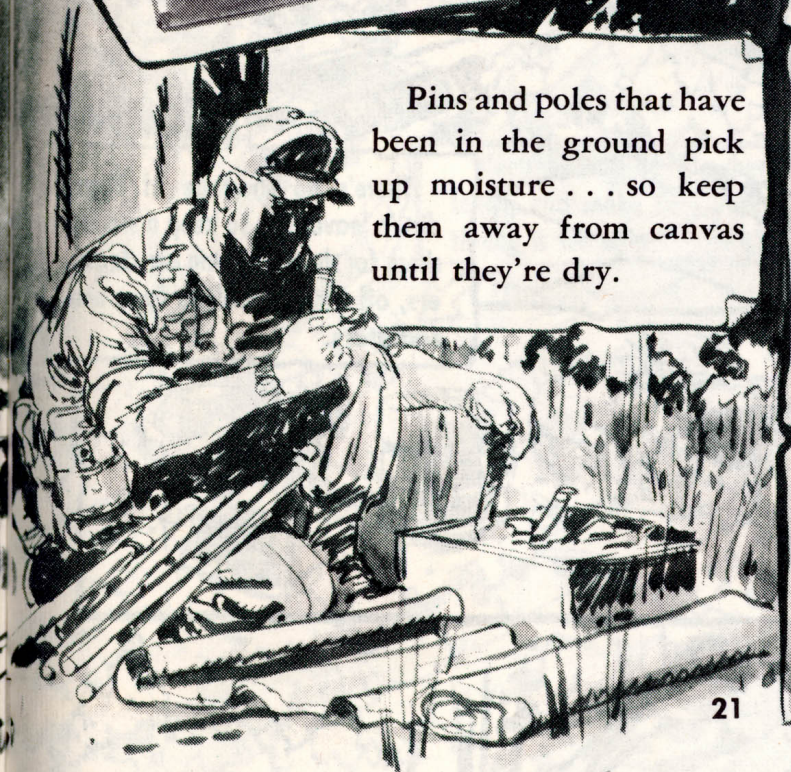

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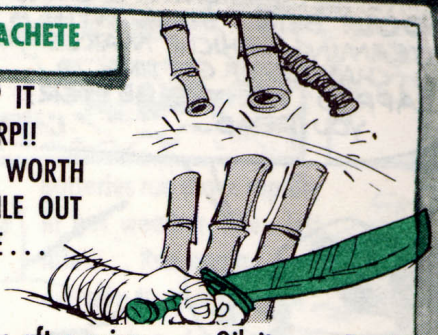
MACHETE

KEEP IT SHARP!! IT'S WORTH A PILE OUT HERE . . .



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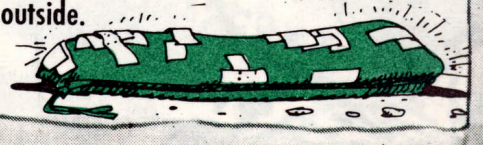


PS MORE

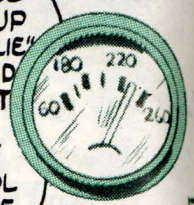
COOLING SYSTEM:

WHEN YOU'RE GRINDING OFF THOSE "CLICKS" IN 110° TEMP AND HUMIDITY TO MATCH TRACKED AND WHEELED VEHICLES, HAVE ONE THING IN COMMON...**TO STAY COOL!** BEING STUCK WITH A STEAMING VEHICLE MAKES YOUR CHANCES OF GETTING "ZAPPED" ALL THE BETTER! YOU READ...

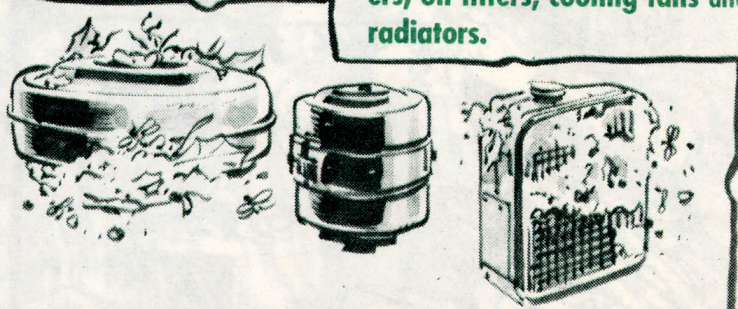
VET

Running under a constant strain, like in a rice paddy, or mud or the like will cook 'er over.

IF Y'R TEMP GAGE IS HEADIN' WAY UP AND IF "CHARLIE" ISN'T AROUND RUN AT A **FAST** IDLE FOR A BIT, THEN SHUT 'ER OFF TO COOL DOWN BY ITSELF.



There's no shortage of bugs, dirt 'n leaves . . . So keep a steady check for them clogging **air cleaners, oil filters, cooling fans** and **radiators.**



VEHICLES

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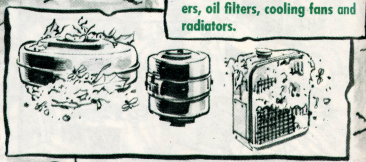

BATTERIES

OUT HERE TH' HIGH HUMIDITY AND HEAT ALSO CLOBBERS BATTERIES AND ELECTRICAL CONNECTIONS. YOU GO NOWHERE WITH NO JUICE!!

REMEMBER, OUT HERE DISTILLED WATER'S HARD TO COME BY. TRY RAIN WATER THAT HASN'T TOUCHED ANY METAL.

- ✓ Batteries run down rapidly in hot weather when left idle . . . Run engine periodically to charge.
- ✓ Check electrolyte level. If down, add distilled water . . . Reading should be 1.200 to 1.225 in hot weather.
- ✓ Check out TM 9-6140-200-15 (July 58) for straight scoop on batteries.
- ✓ Check battery boxes. Clean and repaint if necessary.

Negative on that cold water into a hot engine!! No sense upping th' price of the whole operation by adding on new engine blocks.

Not keeping your radiator clean and full, fan belt and water pump troubles will surely set you up for overheating . . . So check 'em out!!!

Keep the **oil level** where it belongs, and make sure your ignition timing is set right.

MORE

HICLES

BATTERIES

OUT HERE TH' HIGH HUMIDITY AND HEAT ALSO CLOBBERS BATTERIES AND ELECTRICAL CONNECTIONS. YOU GO NOWHERE WITH NO JUICE!!

REMEMBER, OUT HERE DISTILLED WATER'S HARD TO COME BY. TRY RAIN WATER THAT HASN'T TOUCHED ANY METAL.

- ✓ Batteries run down rapidly in hot weather when left idle . . . Run engine periodically to charge.
- ✓ Check electrolyte level. If down, add distilled water . . . Reading should be 1.200 to 1.225 in hot weather.
- ✓ Check out TM 9-6140-200-15 (July 58) for straight scoop on batteries.
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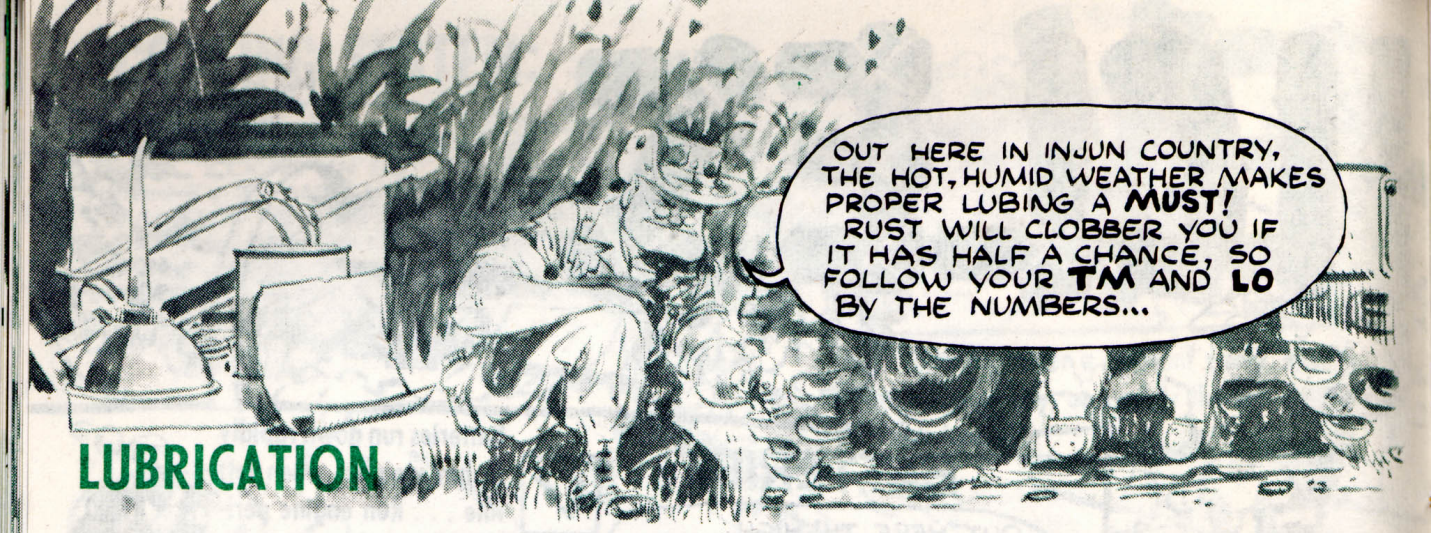
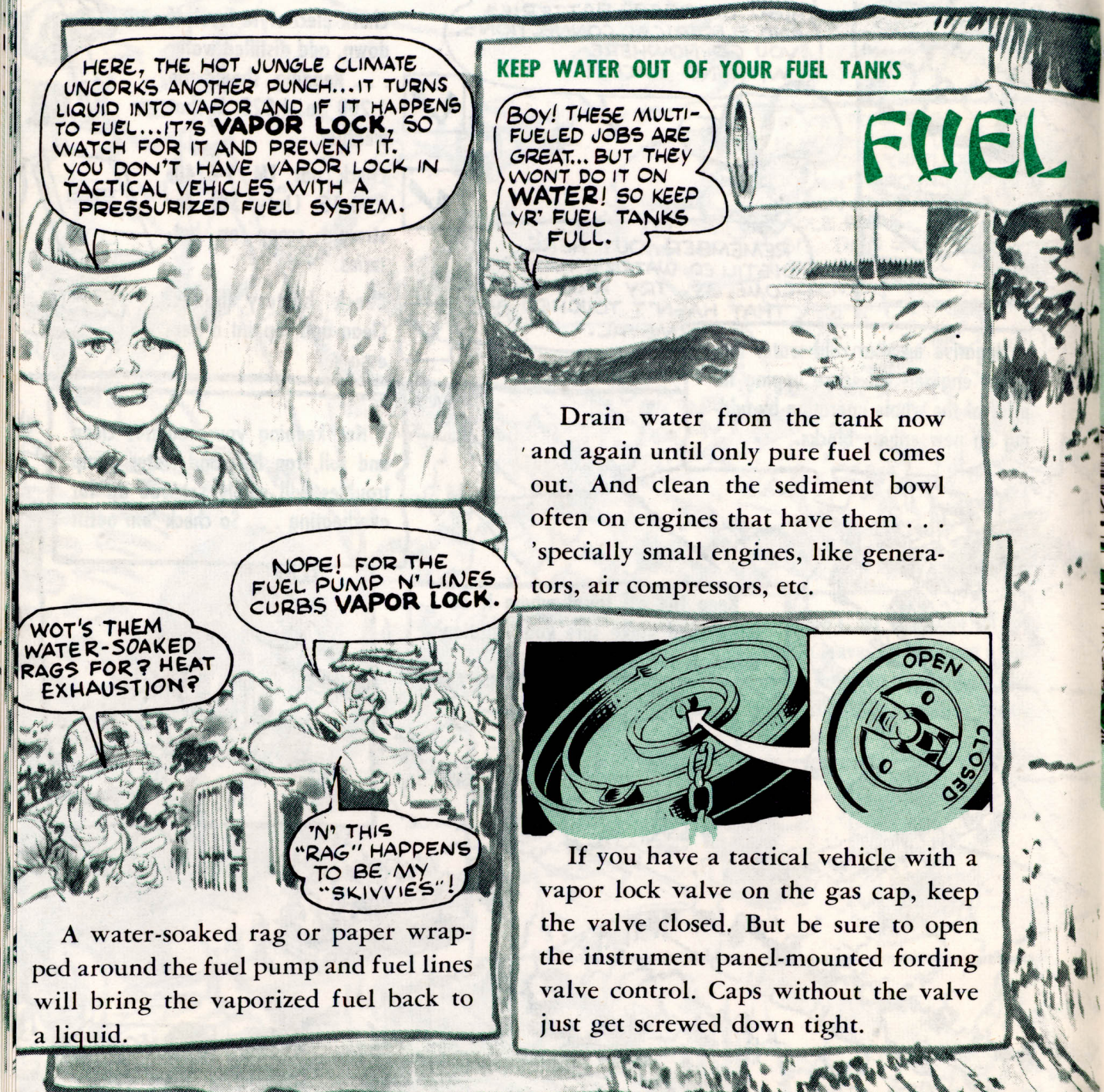
MORE



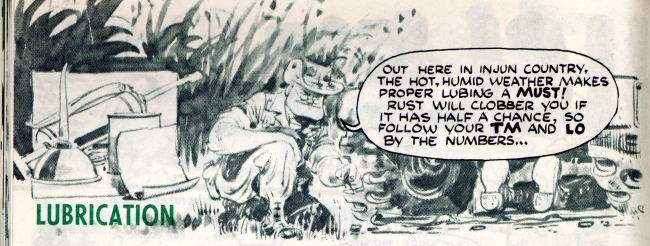
LUBRICATION



Drain water from the tank now and again until only pure fuel comes out. And clean the sediment bowl often on engines that have them . . . 'specially small engines, like generators, air compressors, etc.

A water-soaked rag or paper wrapped around the fuel pump and fuel lines will bring the vaporized fuel back to a liquid.

If you have a tactical vehicle with a vapor lock valve on the gas cap, keep the valve closed. But be sure to open the instrument panel-mounted fording valve control. Caps without the valve just get screwed down tight.



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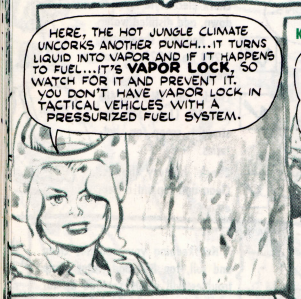

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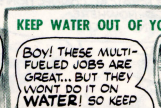
KEEP WATER OUT OF YOUR FUEL TANKS



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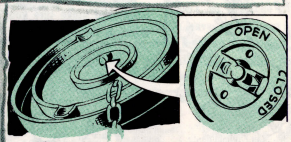

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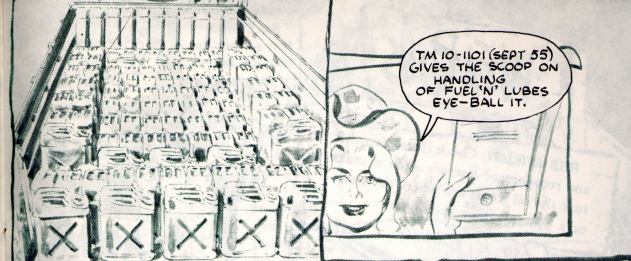
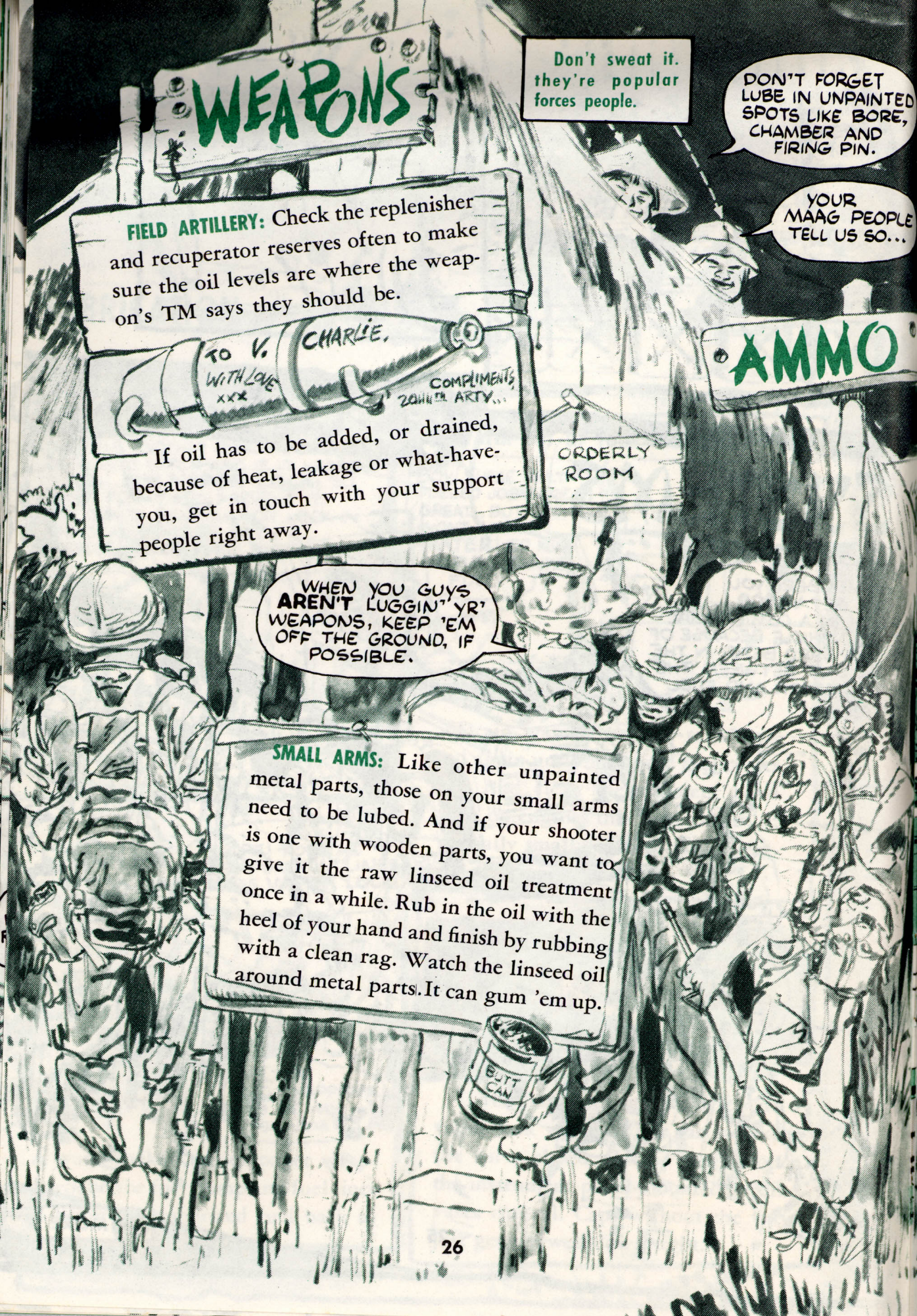


FUEL SYSTEMS

MORE

TM 10-1101 (SEPT 55) GIVES THE SCOOP ON HANDLING OF FUEL 'N' LUBES EYE-BALL IT.
SYSTEMS
REMEMBER! YOU CAN GET **VAPOR LOCK** IN A COMMERCIAL TYPE VEHICLE BECAUSE OF AN UPWARD BEND IN THE FUEL LINE BETWEEN THE CARBURETOR AND FUEL PUMP.

MORE


WEAPONS
Don't sweat it. they're popular forces people.
DON'T FORGET LUBE IN UNPAINTED SPOTS LIKE BORE, CHAMBER AND FIRING PIN.
YOUR MAAG PEOPLE TELL US SO...
FIELD ARTILLERY: Check the replenisher and recuperator reserves often to make sure the oil levels are where the weapon's TM says they should be.
TO V. CHARLIE. WITH LOVE XXX COMPLIMENTS 20th ARTY...
AMMO
If oil has to be added, or drained, because of heat, leakage or what-have-you, get in touch with your support people right away.
ORDERLY ROOM
WHEN YOU GUYS AREN'T LUGGIN' YR' WEAPONS, KEEP 'EM OFF THE GROUND, IF POSSIBLE.
SMALL ARMS: Like other unpainted metal parts, those on your small arms need to be lubed. And if your shooter is one with wooden parts, you want to give it the raw linseed oil treatment once in a while. Rub in the oil with the heel of your hand and finish by rubbing with a clean rag. Watch the linseed oil around metal parts. It can gum 'em up.
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Ammo gets **touchy** in high temperatures and humidity so . . .

Keep in its containers until its ready to go!

Keep it outa the sun.

Store it like this . . .

FUZES

We know you know this, but . . . keep 'em in their sealed containers until used . . . dampness makes 'em go haywire!

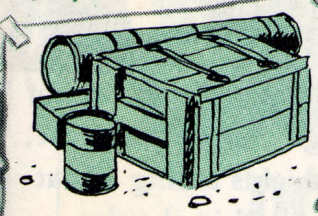
CAMERAS: Use a clean rag to get rid of moisture or fungus, no matter where you find them. Fungus is rough on moving parts.

FILMS AND CHEMICALS: These items can't take the heat. In other words, store them in the coolest spot you can find. If there's a refrigerator in your area, use it for storing film . . . if you can get space for it.

WOW! WHERE DID YA' GET THAT WILD WALL-PAPER?

MORE

Ammo gets touchy in high temperatures and humidity so . . .



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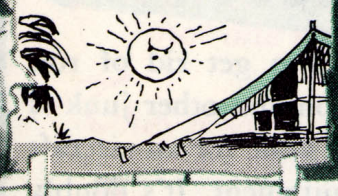

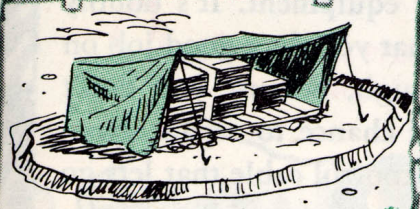

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CONNIE PIN-UP FOR ACK-ACK

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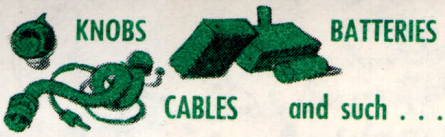
MORE

ELECTRONICS

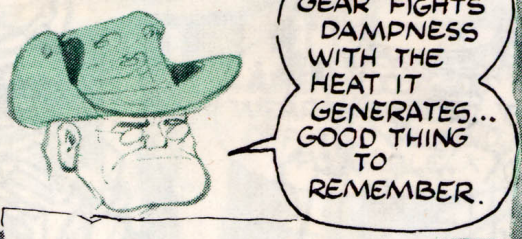
Heat and humidity kills electronic gear of all types, if you let it . . . Keep moisture off



Be sure power cable connectors components are tight . . .

If potting compound is cracking, holler for support.

Some electronic gear looks alike. Check your TM just to be sure. Especially when you clean . . .

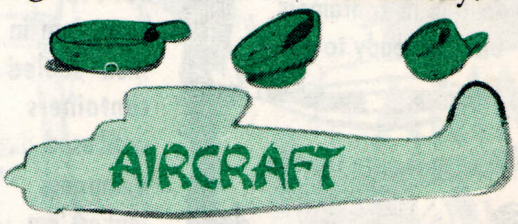


Dry cells got it rough in hot weather — even when being used . . . So store 'em where it's cool and dry . . . Unpack only when you are gonna use 'em.

OPTICAL GEAR

If any fungus gets to **scopes, rangefinders** or **binoculars** . . . f'r gosh sakes, don't play with 'em, let support handle the job.

And remember that direct rays of the sun are rough on optical gear, with rubber eyeshields taking a beating from that hot ball in the sky.



What you do to get rid of rot, mildew, corrosion and other junk is pretty much the same for an aircraft as for other equipment. It's doubly important that you do a good job on aircraft, though, because you don't get a second chance to repair something like a control cable that lets go because of rust — not when you're 500 feet up, that is.

You have rainy spells when things won't dry out . . . and even with the sun shining, you need a little heat to dry things like leather boots (if you're in a hurry), leather camera cases and optical instruments, or maybe protect electrical or electronic equipment during a siege of high humidity. The answer is what you might call a dryer, dry locker or drying cabinet.

The dryer can be something as simple as a packing box and a 40-watt bulb. Or you can "move up" to a cabinet with such things as shelves and ventilating holes.

JOE'S DOPE

You've gotta CARE to do your VERY BEST.

'Twas the night before Christmas,
and in Santa's house

Not a creature was worried,
not one man did grouse.

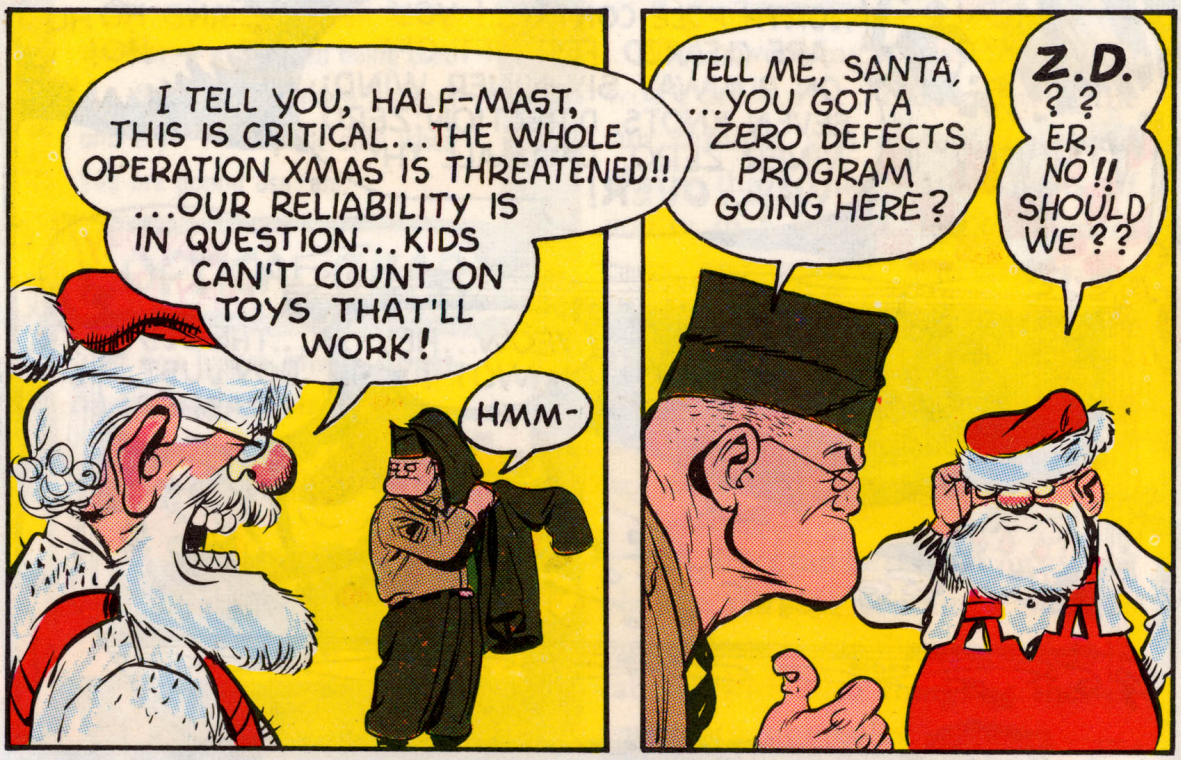
They'd squeaked thru inspections
just-passed-by-a-hair

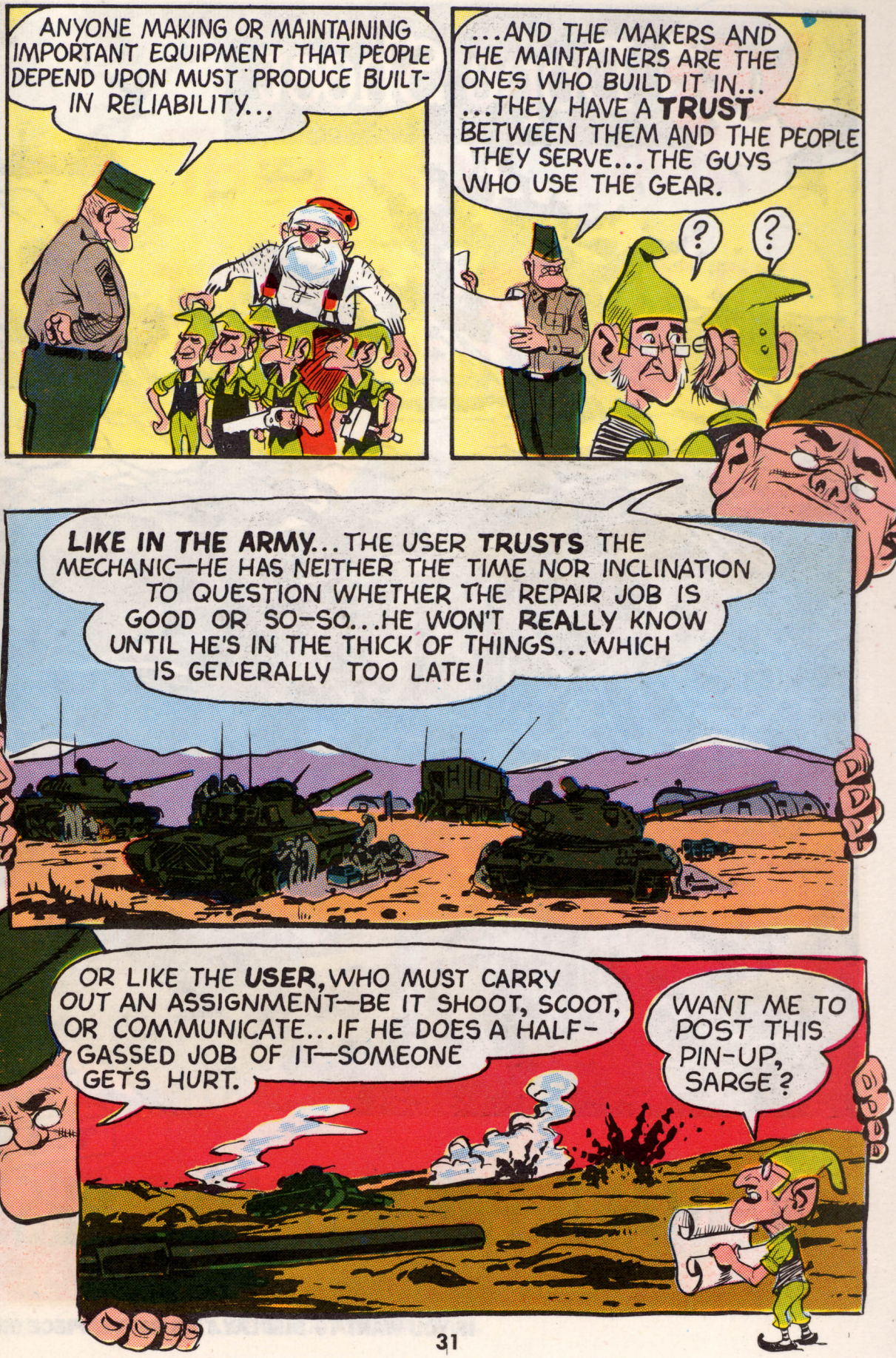
Oh, they delivered the work
...but they just didn't care.

All over the world, kids snug in their beds, whilst dreams of big loot danced in their heads;

While Santa up there on that polar ice cap Near blowed the whole bit — in a singular flap!!

So hardly had phones ceased their ol' clatter When there was ol' Sarge — to check on the matter.




ANYONE MAKING OR MAINTAINING IMPORTANT EQUIPMENT THAT PEOPLE DEPEND UPON MUST PRODUCE BUILT-IN RELIABILITY...
...AND THE MAKERS AND THE MAINTAINERS ARE THE ONES WHO BUILD IT IN...
...THEY HAVE A TRUST BETWEEN THEM AND THE PEOPLE THEY SERVE...THE GUYS WHO USE THE GEAR.
?
?
LIKE IN THE ARMY...THE USER TRUSTS THE MECHANIC—HE HAS NEITHER THE TIME NOR INCLINATION TO QUESTION WHETHER THE REPAIR JOB IS GOOD OR SO-SO...HE WON'T REALLY KNOW UNTIL HE'S IN THE THICK OF THINGS...WHICH IS GENERALLY TOO LATE!
OR LIKE THE USER, WHO MUST CARRY OUT AN ASSIGNMENT—BE IT SHOOT, SCOOT, OR COMMUNICATE...IF HE DOES A HALF-GASSED JOB OF IT—SOMEONE GETS HURT.
WANT ME TO POST THIS PIN-UP, SARGE?

WE HAVE THE WORLD'S BEST EQ

IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BU

IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BULLETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.

LLETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.

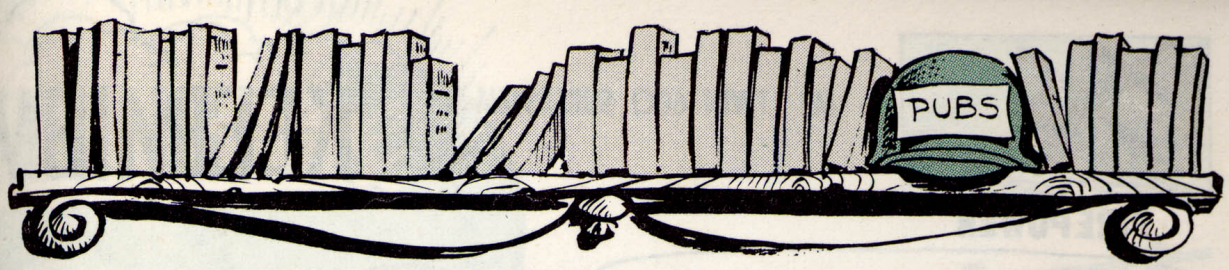
SO, WHAT'S ALL THAT GOT TO DO WITH US... THE LITTLE OLD TOY MAKERS, US ?
EVERYTHING... YOUR TOYS LOOK PASSABLE BUT SEE, NUTS NOT REAL TIGHT, PAINT THIN IN SPOTS...WHEELS A BIT LOOSE.
SO, WHO CAN BE A PERFECTIONIST WITH OUR DEADLINES?
YOU MISSED THE POINT, KID ...IT'S - YOU - JUST - DON'T - CARE ...TWO WEEKS FROM NOW YOU'D FEEL REAL BAD TO HEAR THAT A WHEEL WORKED LOOSE...
BUT RIGHT NOW YOU'RE SATISFIED JUST TO PASS INSPECTION!
BY DUNDER, HE'S RIGHT... WHO WORKED ON THIS TOY?
ME...
HOW DO I KNOW THESE HOLDDOWN BOLTS ARE THE RIGHT ONES...IF IT ISN'T... THIS SPRING COULD COME LOOSE AND...

WELL, THE TRUTH IS, SANTA, I WUZ TOO LAZY TO GO GET THE AUTHORIZED BOLTS... SO I SCROUNGED SOME THAT LOOKED LIKE IT-AND-FIT!!
HEY, SANTA, A TWX JUST COME IN FROM AN EARLY DELIVERY AREA!!
GOOD GRIEF!
WHAT'S THE MATTER, SANTA ...WHAT'D IT SAY...?
HERE, R-E-A-D I-T YOURSELF.
CHILD HURT RESULT OF LOOSE SPRING IN TOY...
OH! NO

So over the housetops the world-o'er they flew
With a sleighful of toys and St. Nicholas too...

And fast as a twinkling from roof-top to roof
Distributing toys that had nary a goof

Some heard him exclaim as he drove out of sight,
"Merry Christmas to all, and let's ALL DO IT RIGHT
(THE FIRST TIME)



A selected list of recent publications of interest to Organizational Maintenance Personnel. This is a list compiled from recent Adjutant General's Distribution Center Bulletins. For complete details see DA Pam 310-4 with latest changes.

TECHNICAL MANUALS

TM 5-2805-203-24P, Jul, Eng, Gas, 6 HP; Mil Std 4A032-1.
TM 5-2805-213-24P, Jul, Eng, Gas, 14 HP Mil Std A042 Used on Truck, ½ Ton, M284A2.
TM 5-3431-215-25P, Aug, Welding Mach, Arc, Generator, 300 AMP, Libbey Welding Co, LEB 300.
TM 5-4120-204-25P, Aug, Organizational, Nike-Herc, Nike-Herc (Imp).
TM 5-6675-240-15, Jul, Battery Power Supply: Night Illuminated Surveying Instruments.
TM 9-1005-222-12P/2, Aug, .30-cal rifle, M1.
TM 9-1400-250-15/2, Jul, Organizational, Nike-Herc, Nike-Herc, (Imp).
TM 9-1400-500-25P, Aug, Organizational, Hawk.
TM 9-1410-375-15P/2/2, Aug. Organizational, Pershing.
TM 9-1430-253-12P/1/1, Aug, Organizational, Nike-Herc (Imp).
TM 9-1430-501-15P/2, Jul, Organizational, Hawk.
TM 9-1430-502-15P/2, Jul, Organizational, Hawk.
TM 9-1430-503-15P/2, Jul, Organizational, Hawk.
TM 9-1430-512-15P/2, Jul, Organizational, Hawk.
TM 9-1440-250-15P/3/1, Jul, Organizational, Nike-Herc, Nike-Herc, (Imp).
TM 9-1440-375-12P/1, Jul, Organizational, Pershing.
TM 9-1440-500-20, Jul, Organizational, Hawk.
TM 9-2300-223-20P, Jul, MPLL.
TM 9-2350-201-ESC, Jun, M41-series tank.
TM 9-2350-222-10, Aug, Vehicle, Combat Engineer, T118E1 W/E (2350-795-1797).
TM 9-7022, C11, Aug, M48A2 Tank.
TM 9-8140-375-12P/1, Jul, Organizational, Pershing.
TM 10-500-105, Jul, Airdrop of Supplies and Equip.
TM 10-1113, Jul, Pet. Tank, Vehicle Operation.
TM 10-1670-206-23P, Jul, Parachute, Personnel and Ejection Seat Drouge System.
TM 10-1670-217-23P, Jul, Parachute, OA-2343/USD-1, drone recovery 144-ft. dia.
TM 11-5820-203-15, Jul, Radio Repater Set, AN/MRC-54 (v).
TM 11-5850-203-ESC, Aug (U), Organizational, OV-1C.
TM 11-6130-246-25P, Aug, Repair parts, special tool lists power supply PP—1104C/G.
TM 55-1510-202-ESC, Aug, (O-1A).
TM 55-1510-202-20P, C3, Aug, (O-1A).
TM 55-1510-203-10-CL, Jul, (U-6).
TM 55-1510-203-20P, C3, (U-6).
TM 55-1510-203-20PMD, Jul, (U-6).
TM 55-1510-203-20PMI, Jul, (U-6).
TM 55-1510-203-20PMP, Jul, (U-6).
TM 55-1510-206-20 PMD, Jul, (CV-2).
TM 55-1520-202-20, C7, Jul, (CH-34).
TM 55-1520-203-10-CL, Jun, (CH-37).
TM 55-1520-203-20P, C3, Aug, (CH-37).
TM 55-1520-204-20PMP, Jun, (OH-13).
TM 55-1520-206-20PMP, Jun, (OH-23).
TM 55-1520-209-10CL, Aug, (CH-47).
TM 55-1520-211-10, Jul, (UH-1).
TM 55-1520-211-10, C1, Aug, (UH-1).
TM 55-1520-211-10, C2, Sep, (UH-1).
TM 55-1520-211-10CL, C3, Aug, (UH-1).

TECHNICAL BULLETINS

TB 9-1400-299-10/1, Aug, Missile and Rocket System Equip Improvement Report and Maint Digest.
TB 9-1400-324-10, Aug, Missile and Rocket Systems Equip Improvement Report and Maint Digest.
TB 9-1400-399-10, Aug, Missile and Rocket Systems Equip Improvement Report and Maint Digest.
TB 9-2300-274-20, Jun, Tank, M48, M67, M60 and M103 and series tanks. Instl of Lockwasher on Tk threaded end Connector Bolt.
TB AVN 10, C1, Jul, Aircraft first aid kit.
TB 55-1510-204-10/2, Sep, (OV-1) AO-1.
TB 55-1510-204-30/1, Sep, (OV-1).
TB 55-1520-204-30/2, C1, Aug, (OH-13).
TB 55-1520-209-20/10, Sep, (CH-47).

MODIFICATION WORK ORDERS

MWO 9-1410-250-20/12, Sep, Organizational, Nike-Herc, Nike-Herc, (Imp).
MWO 9-2300-224-20/16, Aug, Pershing.
MWO 10-1670-207-20/1, Aug, Expander Assy, Aerial Delry, Energy Dissipating Pad.

Listed here are older publications that are freshly available as a result of reprinting. Order copies on DA Form 17.

MISCELLANEOUS

LO 5-2410-209-12-1, Aug, Tractor, Full Tracked, Low Speed: Diesel Eng; Allis-Chalmers HD16M.
LO 5-2410-209-12-2, Aug, Tracior, Full Tracked, Low Speed: Diesel Eng; Allis-Chalmers HD16M.
LO 9-1440-301-12, Jul, Organizational, Sergeant.
LO 9-2320-213-12, Aug, TK, plat, utility M274A1.

A Complete Bird Book

Air types should take a peek at AR 750-1500-2 (13 Sep 65) on technical pubs for aircraft files to find out what's in a "complete" on-board log book. Included is the Equipment Serviceability Criteria Sheets, Daily, Intermediate and Periodic PM Checklists and DA Forms 2408, 2408-3, -12, -13, -14, -18.

A Classy Number

A slipped digit'll have you in a bind when you're trying to latch onto a fixed paper dielectric capacitor for your Hol-Gar Model CE 106AC/WK9 gasoline engine generator set. So, use FSN 59**10**-076-1838 to straighten 'er out instead of FSN 59**60**-076-1838 which is listed in TM5-6115-269-20P (Sep 64).

FIREPOWER

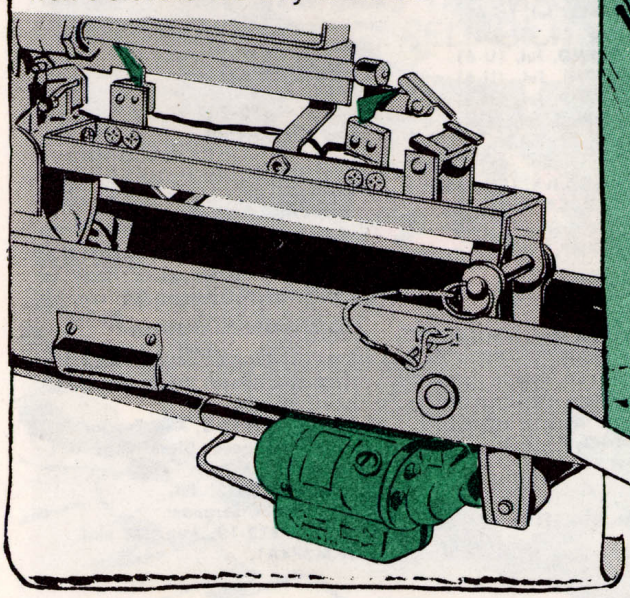
M2 (TWIN 60C) SUBSYSTEM

KEEP 'EM

TWIN M60C'S HAVE BEEN RAKING THE BAMBOO MANY A MOON NOW AND A LOT OF SAVVY'S BEEN BUILT UP BY GUYS WHO KNOW THE MEANING OF "ZAP". SO, LATCH ON TO THESE PM TRICKS AND TREATS TO KEEP YOUR M2 SYSTEM READY TO GO WHEN THAT WHISTLE SHE BLOW.

Keep an eye peeled for the following fouled-up conditions and either fix 'em or get 'em fixed right off.

SWITCH ACTUATOR — Front and rear mounting bolts loose, arms bent, mount assembly won't elevate the way it should.



You want to be real careful of the switch actuator arms which work the arms/safe switches on late production M2's . . . or ones that've been doctored by MWO 9-1005-247-30/1 (20 Jul 65). These arms can get caught in your sleeve or get bent easy while you're working around 'em, so be real alert . . . especially when you're installing the machine gun mount.

KEEP 'EM FIRING!

TWIN M60C'S HAVE BEEN RAKING THE BAMBOO MANY A MOON NOW AND A LOT OF SAVVY'S BEEN BUILT UP BY GUYS WHO KNOW THE MEANING OF "ZAP". SO, LATCH ON TO THESE PM TRICKS AND TREATS TO KEEP YOUR M2 SYSTEM READY TO GO WHEN THAT WHISTLE SHE BLOW.

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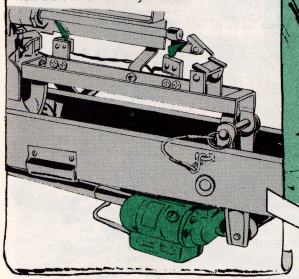
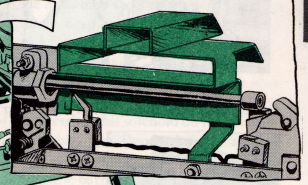


You want to be real careful of the switch actuator arms which work the arms/safe switches on late production M2's . . . or ones that've been doctored by MWO 9-1005-247-30/1 (20 Jul 65). These arms can get caught in your sleeve or get bent easy while you're working around 'em, so be real alert . . . especially when you're installing the machine gun mount.

DEFLECTOR ASSEMBLY — Missing, loose.



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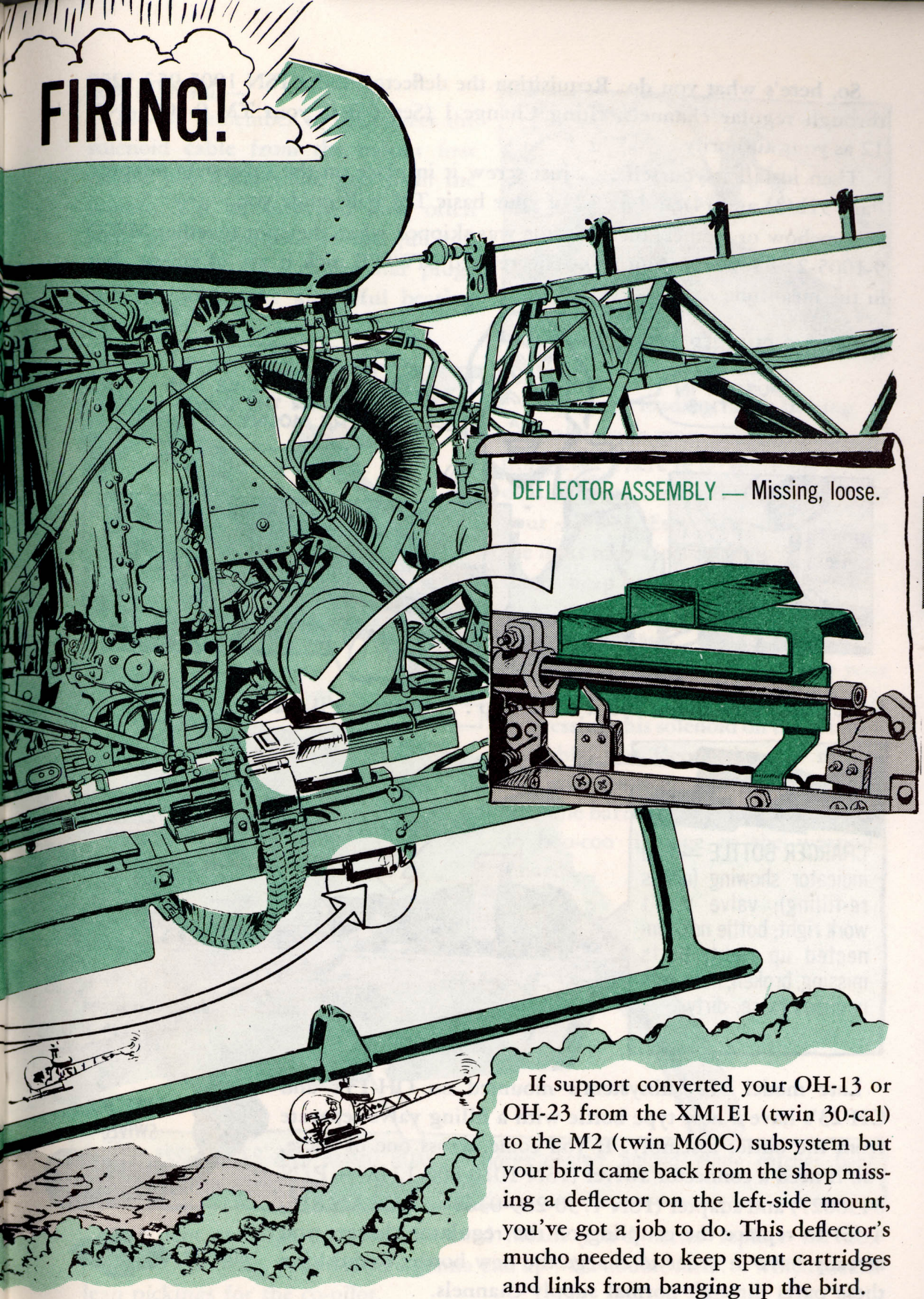
FIRING!



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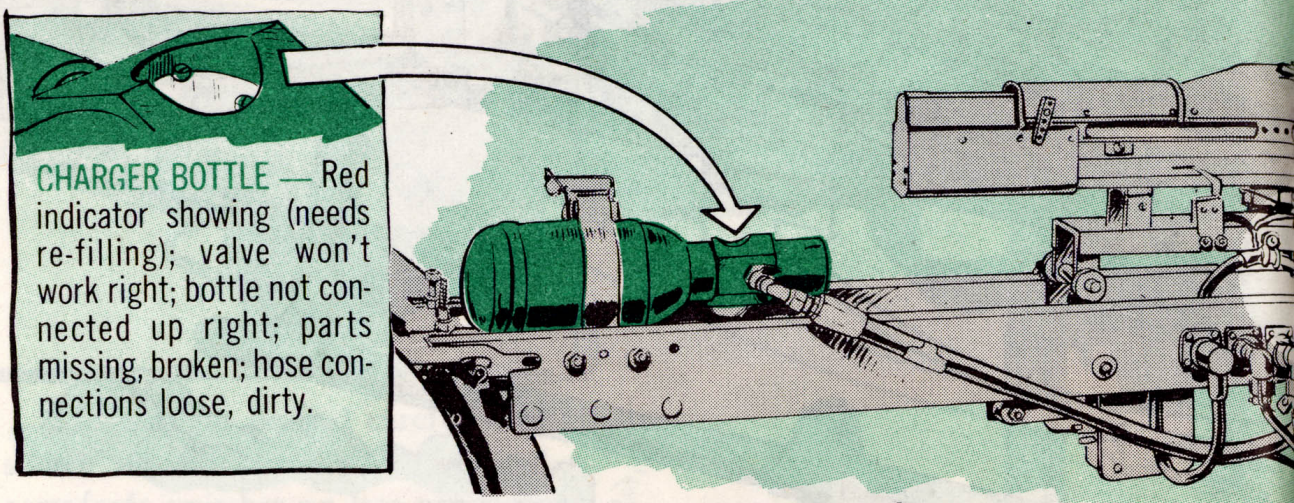
P.S. MORE

So, here's what you do: Requisition the deflector under FSN 1005-952-3259 through regular channels, citing Change 1 (Sep 64) to your TM 9-1005-247-12 as your authority.

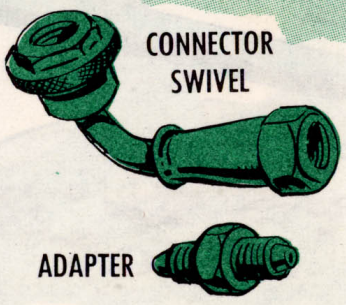
Then install it yourself . . . just screw it in place on the subsystem adapter. Para 51b(3) and (4) and fig 37 of your basic TM will guide you.

Somehow or t'other, the deflector was skipped when they put together MWO 9-1005-240-30/2 (7 Aug 64). The revised MWO'll pick it up, of course, but in the meantime . . .

Some dinky dow might use it for a step . . . besides, it'll get rusty.



Late model M2 subsystem's mounted on OH-13's and OH-23's have a new type bottle with a filling valve separate from the outlet assembly. If you come across one of these, you'll need a connector swivel (FSN 1010-806-1248 — P/N 8430027) and adapter (FSN 4730-289-0360 — P/N AN 816-4-4S) to replace the coupling on the regulator charger you already have in order to charge the new bottle. Requisition these parts through normal supply channels.



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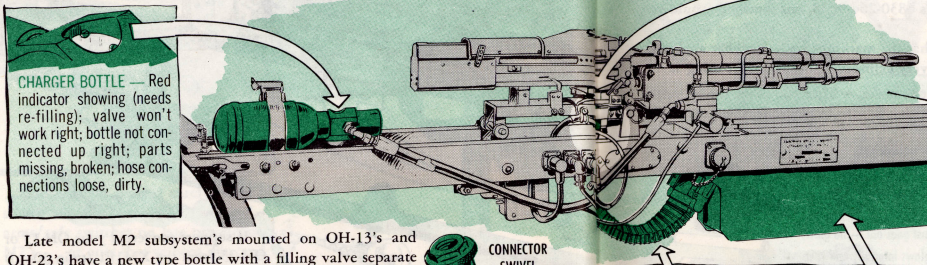

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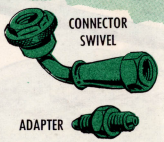
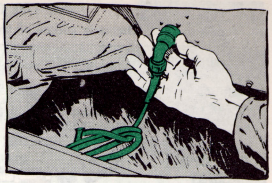


GUN REMOVAL —

Always remember to disconnect the solenoid cable from the mount first before you remove the gun from the mount. Y'd be surprised how often some guys'll just pick up the gun and start walking off — cables and plugs and solenoids take an awful beating this way.



LOADING —

Improper loading and linking of ammo can ruin more missions than anything else. There're no shortcuts on this deal. Stick to the routine in para 18 of your -12 TM. Especially, don't step on the links to get 'em on. You're stepping into a heap of trouble if you do.

DRY-FIRING —

It's great to be able to function your weapon without climbing in the ship by pressing this solenoid on the actuator assembly, but f'goshsakes, be mighty sure you **never** do this with the barrel out. The barrel's got to be in—or you'll do boo-coo damage to the weapon's innards.

CHUTE ASSEMBLIES AND AMMO BOXES — Boxes dented, bulged; chute catches bent, won't attach to ammo boxes or machine gun.

Any dent or bulge that can't be fixed means you'd better replace the box pronto. Otherwise, your M60C's gonna end up with double feed . . . which means lean pickings for the co-pilot.

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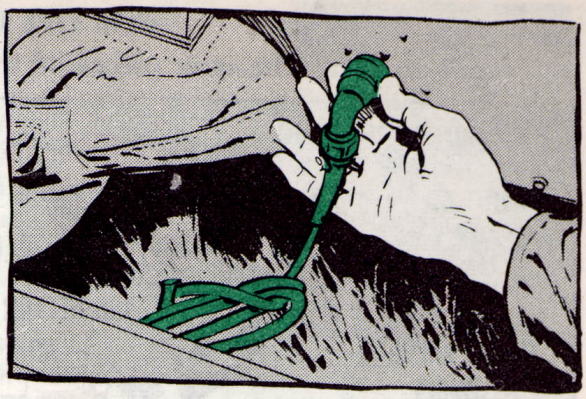

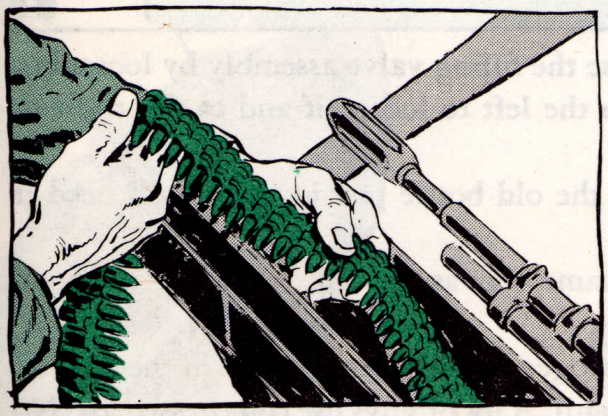

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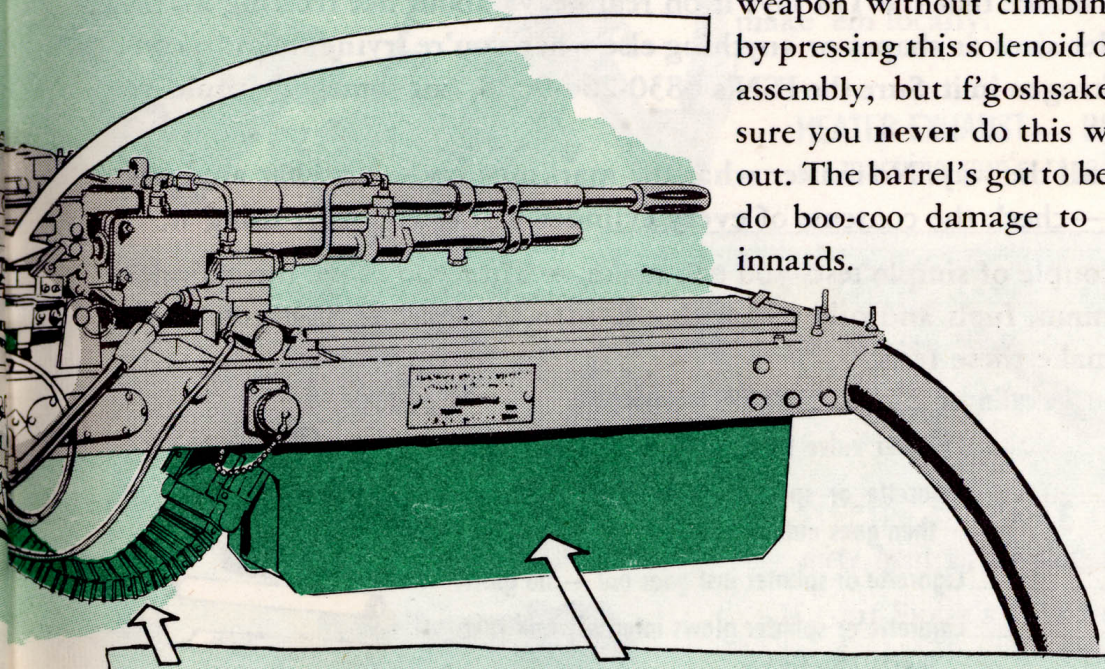

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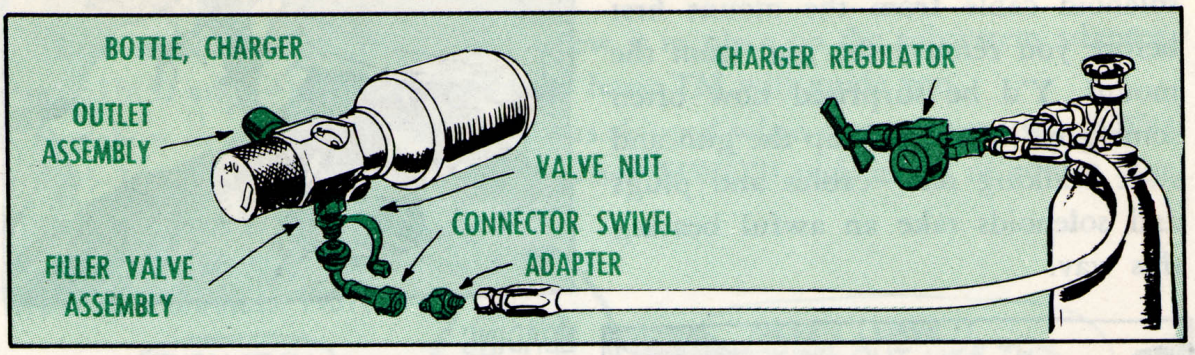
P.S. MORE

NEW TYPE CHARGER BOTTLE

Here's the way the new pieces of the charger bottle fit together:



After it's installed, you open and close the filling valve assembly by loosening or tightening the valve nut, turning to the left to loosen it and to the right to tighten it.

Keep the quick-break coupling from the old bottle just in case you'll need it some time.

O'course, you fill the new bottle the same way as the old, following the poop in para 47 of your -12 TM.

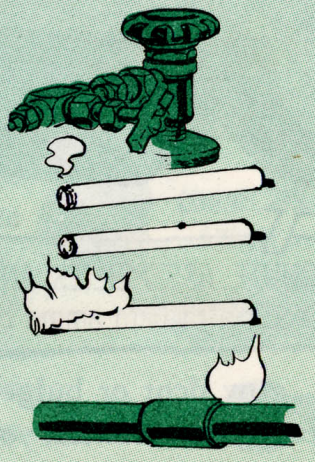
Incidentally, the pub says use only nitrogen in these bottles, but in the land of the rice paddy this may be a hard order to fill. A lot of guys use compressed air. No sweat. BUT, don't ever use anything except nitrogen or compressed air. Get it?

You'll also notice that the TM lays it on real heavy about not trusting markings or cylinder sizes or shapes or anything else when you're trying to find a container with nitrogen in it. Sure the FSN's 6830-264-9088, but somebody could've goofed.

Play it safe all the way. No matter what the markings say — or what anybody else tells you — check the contents of every cylinder before you start using it.

Here're a couple of simple tests you can make — after you move the cylinder away from ammo, fuels and other stuff that'll burn. A cigarette or splinter's all you need to make these tests.

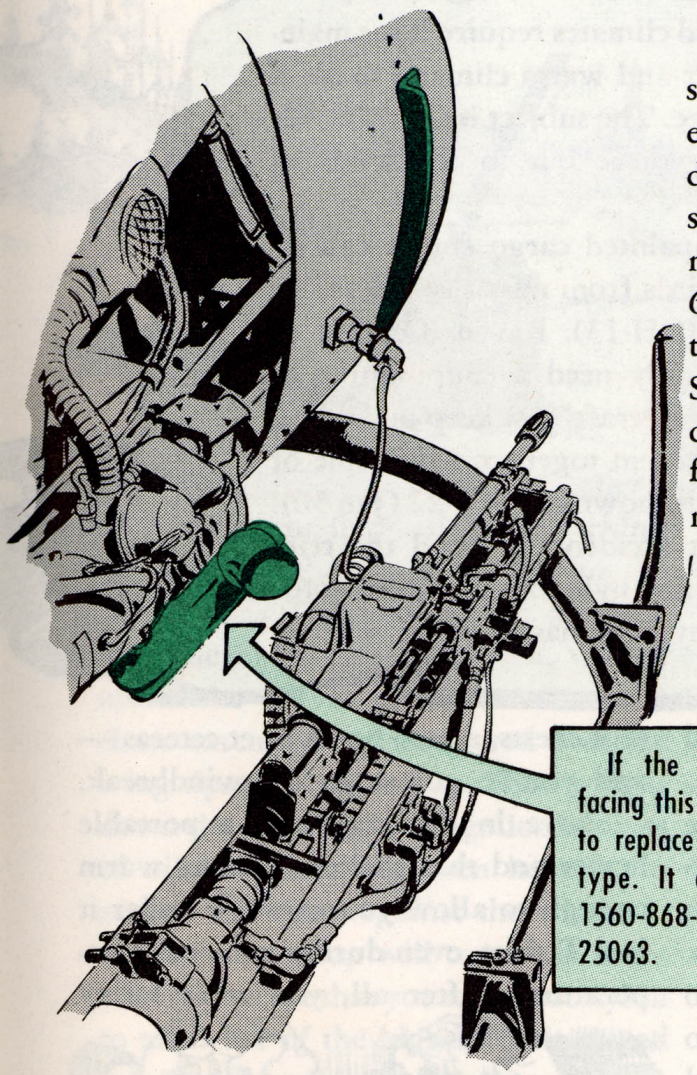
Here's what's in the cylinder	If this happens:
Carbon dioxide	Cylinder valve turns white or gets very cold.
Nitrogen	Cigarette or splinter glows slightly at first, then goes out.
Helium	Cigarette or splinter just goes out — no glow.
Oxygen	Cigarette or splinter glows intensely and then bursts into flame.
Hydrogen	Escaping gas ignites and burns with a blue or colorless flame.
Acetylene	The threads on the cylinder won't fit your regulator gage anyway, so don't fuss around any further.



Here're a couple other tips on the charger system:

Any time you have to remove the hose from the charger bottle, first turn off the charger bottle valve. Then put a piece of tape over the loose end of the hose to keep dust and dirt out. Or, if you remove the hose from the charger assembly end, put tape over the charger valve. If dirt gets in the hose and works its way into the valves or charger system, your M60C's in for a hard time.

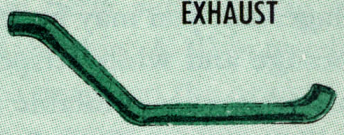
MUZZLE BLAST SHIELD — Cross-recess screws loose, missing; shield bent.



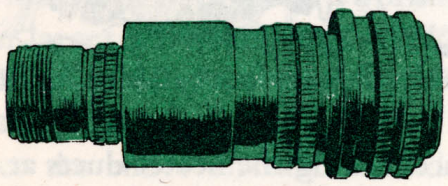
If your ship has 'em, fine, OK, make sure they're in good condition. However, if your ship doesn't have 'em, don't give 'em a second thought. The shields were authorized under the original MWO 55-1520-204-34/8 (1 Aug 62) but were not even mentioned in the 11 July 1963 revision of the MWO. Shields are not in the supply system and can't be requisitioned, but any unit that feels a need for 'em can go ahead and make 'em locally.

HEATER EXHAUST — Blasts hot breath on machine gun's receiver and ammo.

If the heater exhaust's facing this way, get support to replace it with the new type. It answers to FSN 1560-868-1069 . . . P/N 25063.

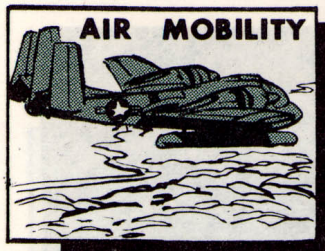


ELECTRICAL CABLE PLUGS — Pins dirty, bent, wrong plug; adapter missing.



If your Sioux's M1E1 or M2 kit "C" has a 5-pin plug, and the internal kit "A" has been wired according to MWO 55-1520-204-34/22 (19 Jan 65), you'll need an adapter to connect it up to the M60C gun's 14-pin system. Ask for adapter, electrical connector (11010073 . . . FSN 1005-013-7157) and you're still in business.

END



A COVER FOR ALL SEASONS OR . . .

Wet weather and cold climates require it for maintenance — dry weather and warm climates make it necessary for camouflage. The subject is CYA (Cover Your Aircraft) when you're out in the wilds of booneyland.

Salvage camouflage-painted cargo chutes can do a good job of hiding birds from nosy sky riders. To camouflage the Sioux (OH-13), Raven (OH-23) or Bird Dog (O-1), you only need a couple-three of these chutes. For larger aircraft, just keep on adding more chutes . . . or mix 'em together with some of the camouflage materials shown in FM 5-22 (Jan 56). Just be sure you don't accidentally bend the trim tabs when you're wrapping nylon around those rotor blades — or damage any antennas.

In snow covered areas, you'll find all-white cargo chutes better for camouflage. But you may be forced to use the orange and white striped variety if no all-whites are available . . . and slap on a little white paint to bust up the strips.

Since snow and low temperatures go together, camouflage covers can also serve as maintenance shelters in cold weather areas. Just tie the chute directly to the fuselage and leave a little slack at the bottom for a snow anchor — unless you prefer to weight it down with tool chests, ammo boxes or et ceteras — and you've got a perfect windbreak.

Shove in ducting from a portable heater and that shelter becomes warm enough to allow you to work under it in a T-shirt, even during sub-zero temperatures. After all, you can't safety

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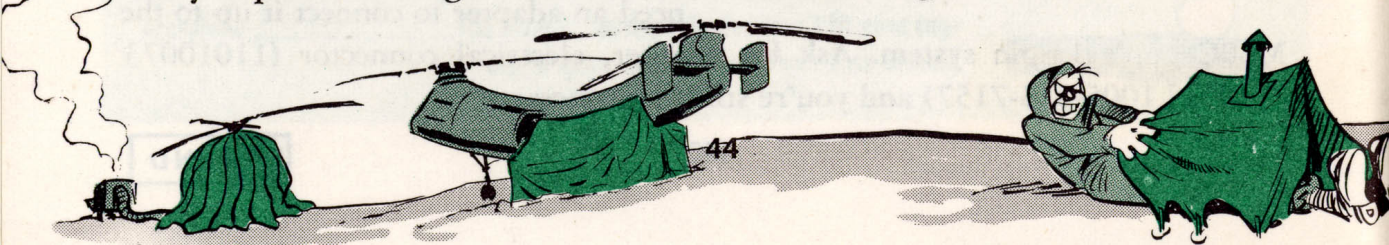

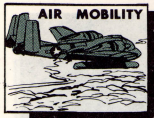

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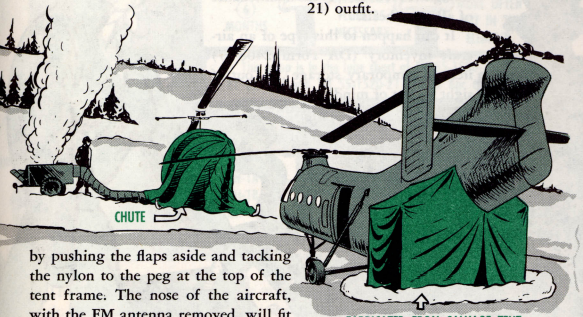
an aircraft with baseball bats for fingers and a chill wind to cool your morale. Concentrating the heater ducts at individual spots will speed up preheating, too, by directing all the heat at engines, batteries, oil sumps and instrument panels while you're servicing the aircraft.

For Beavers (U-6A) and larger aircraft, you can combine cargo chutes with the issue maintenance shelter tent by pushing the flaps aside and tacking the nylon to the peg at the top of the tent frame. The nose of the aircraft, with the FM antenna removed, will fit under the canvas of the tent and the chute extension can be spread over the wing tips and tail section. Then weight down the chute with five-gallon buckets of oil, or something even heavier, to anchor the chute against the wind.

The same setup will cover the Otter (U-1A), except that you add more nylon to take care of the bigger fuselage and tail assembly. But if you're working on even larger starched wings — like the Mohawk (OV-1) or Caribou (CV-2), overlap several salvage chutes so as to cover the entire aircraft. In order to use the maintenance tent for these aircraft, you'd have to raise the metal frame a few feet off the ground to clear the nose assembly.

Where protection from wind, rain and cold is more important than camouflage, you can fabricate something like this engine area compartment work shelter made up by this Shawnee (CH-21) outfit.



FABRICATED FROM SALVAGE TENT

It was made in a day by cutting open a piece of salvage tent to fit the contour of the fuselage belly surrounding the engine area of the ship. A 10-in overlap was allowed to drape on the ground in order to form a snow anchor over it. Dzus fastener flaps were sewed on both sides to attach the shelter to the fuselage. A zipper was left intact for a rear entrance.

These fixes will CYA in combination with the camouflage and maintenance shelter material the Army issues you. Another thought to keep in mind here is: When somebody shoots at you, it's time to chute your aircraft.

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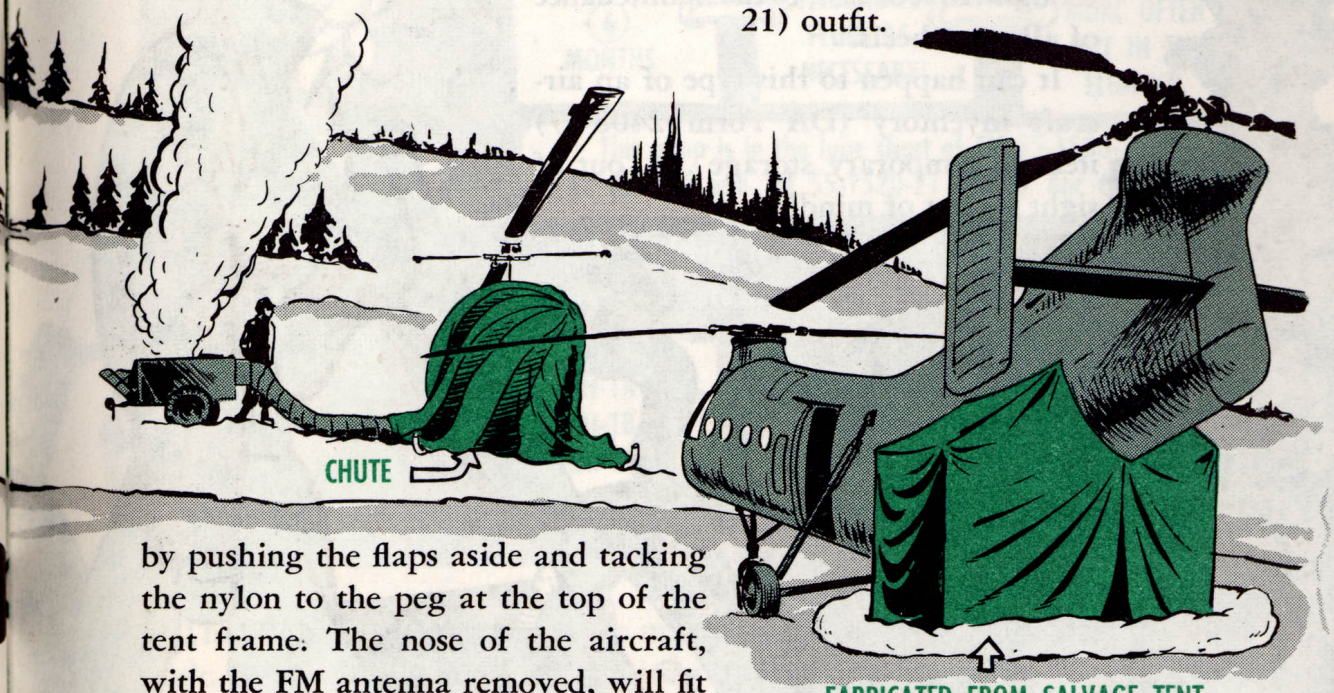

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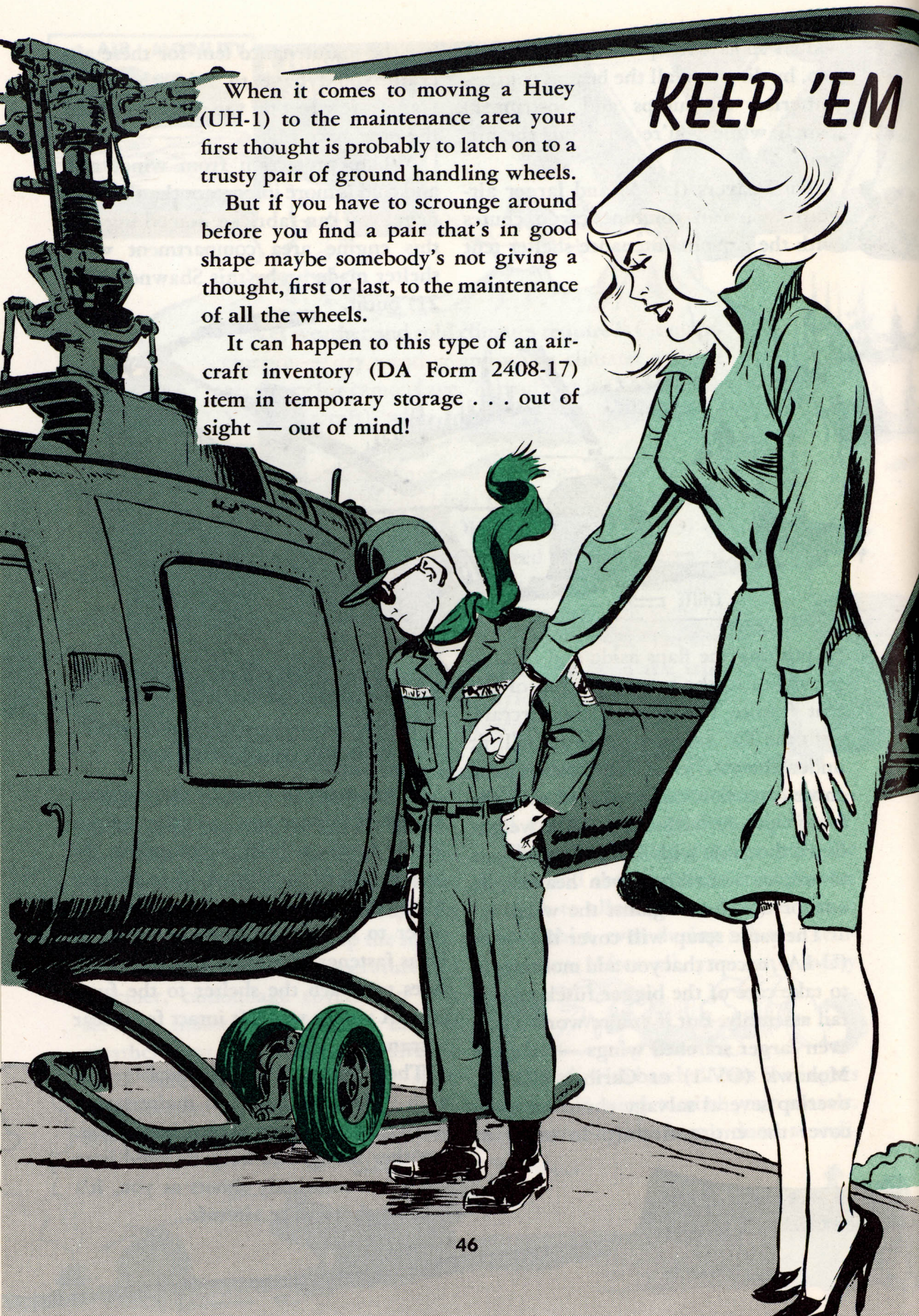
KEEP 'EM

When it comes to moving a Huey (UH-1) to the maintenance area your first thought is probably to latch on to a trusty pair of ground handling wheels.

But if you have to scrounge around before you find a pair that's in good shape maybe somebody's not giving a thought, first or last, to the maintenance of all the wheels.

It can happen to this type of an aircraft inventory (DA Form 2408-17) item in temporary storage . . . out of sight — out of mind!



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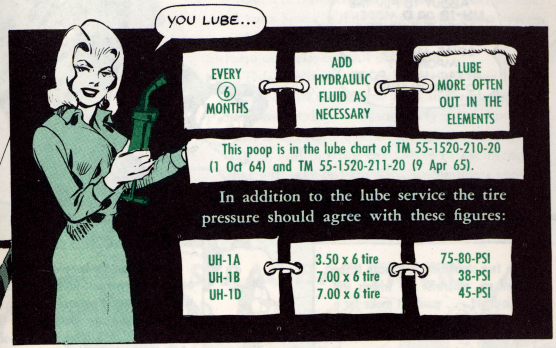
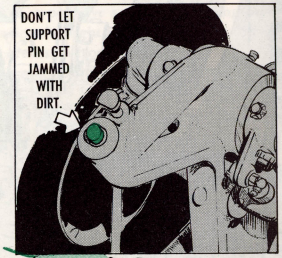


That's about all the preventive maintenance the wheels need to be kept in the pink. But there's another mighty important angle to keep in mind. Proper use — not abuse — of the wheels.

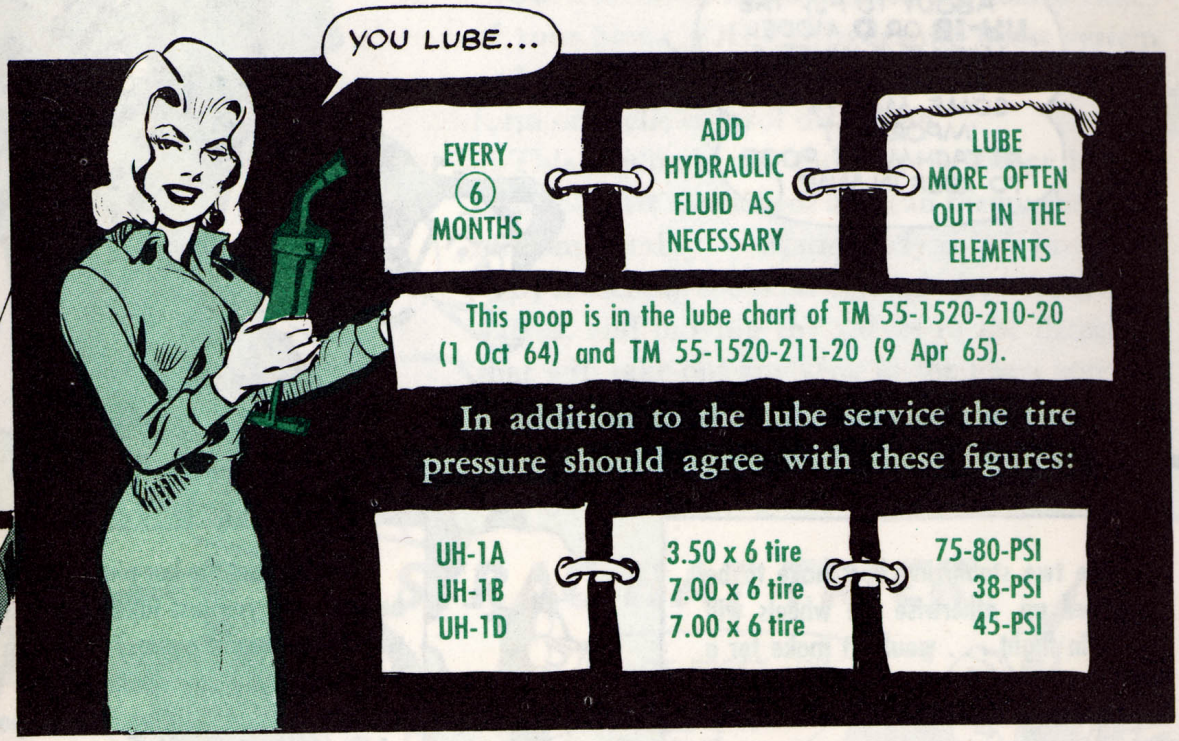
Like — you don't want to let the axle drop so that the support pin and spring get jammed with dirt, or, you don't want to leave the wheels out in the weather so rust takes over and jams up the works.

After all, when a wheel is put on the landing skid you want the spring-loaded locking pin to pop out. It has to be flush with the skid anchoring hole. A slip of the ship could be rough on the toes!



MORE

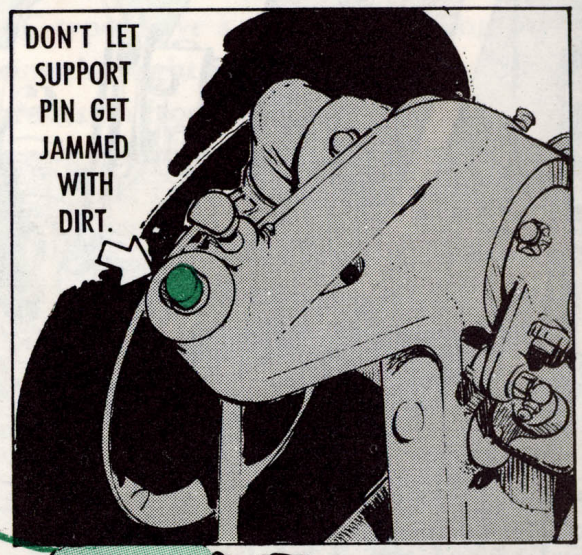
ROLLING!



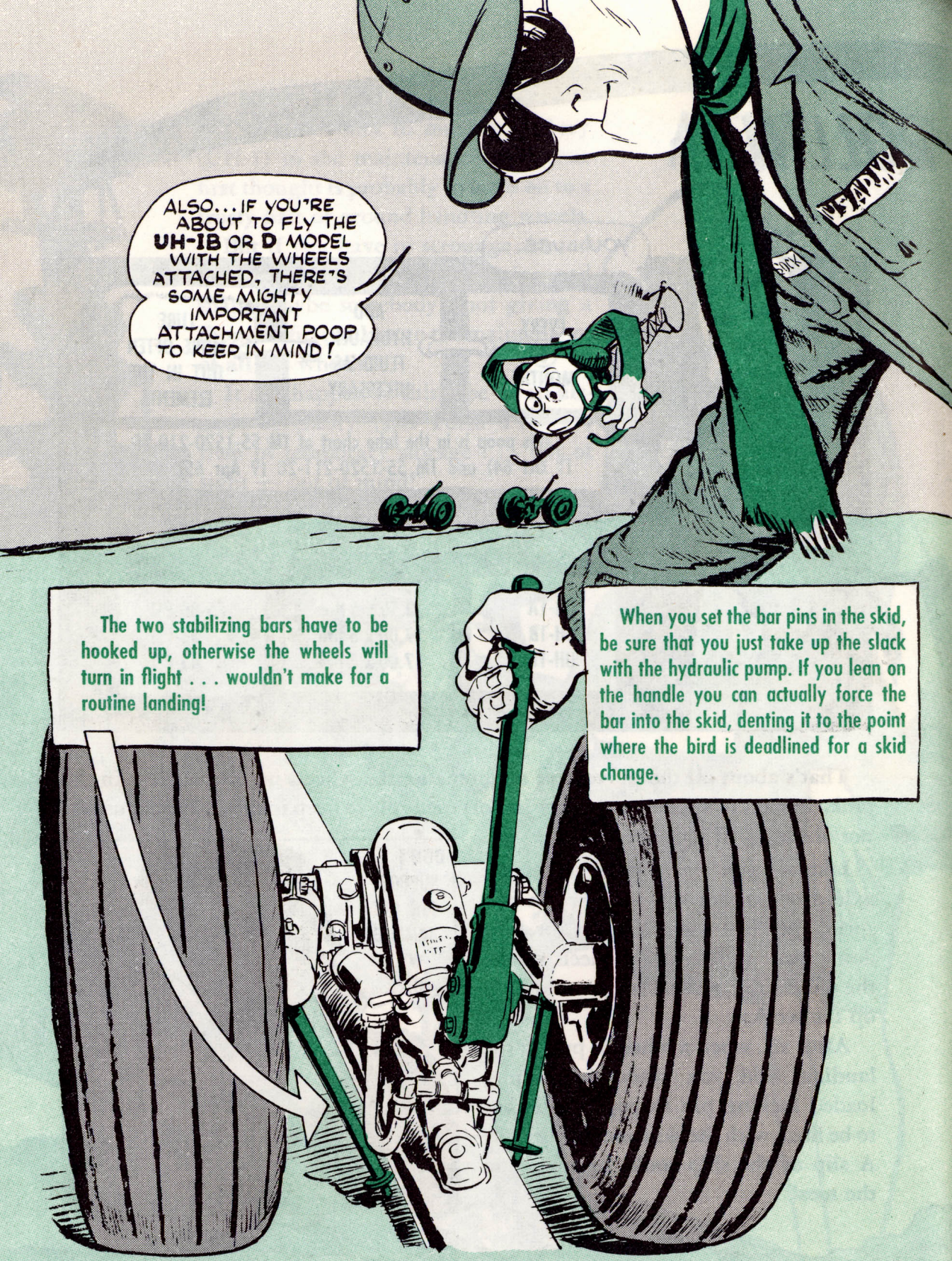
That's about all the preventive maintenance the wheels need to be kept in the pink. But there's another mighty important angle to keep in mind. Proper use — not abuse — of the wheels.

Like — you don't want to let the axle drop so that the support pin and spring get jammed with dirt, or, you don't want to leave the wheels out in the weather so rust takes over and jams up the works.

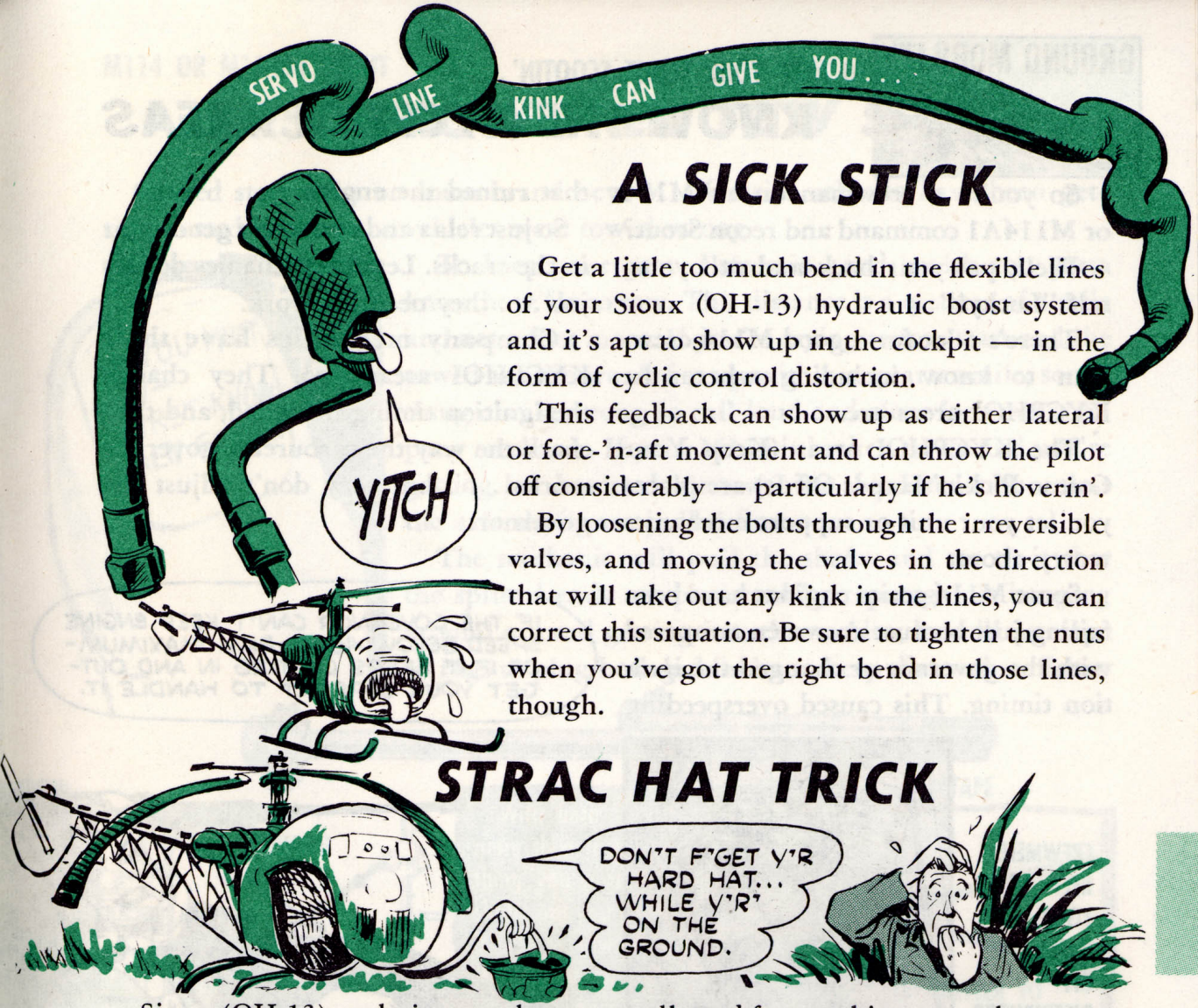
After all, when a wheel is put on the landing skid you want the spring-loaded locking pin to pop out. It has to be flush with the skid anchoring hole. A slip of the ship could be rough on the toes!



PS MORE



So-o-o-o . . . whether the ground handling wheels are on or off your bird, remember to keep 'em rolling, via the preventive maintenance route.



A SICK STICK

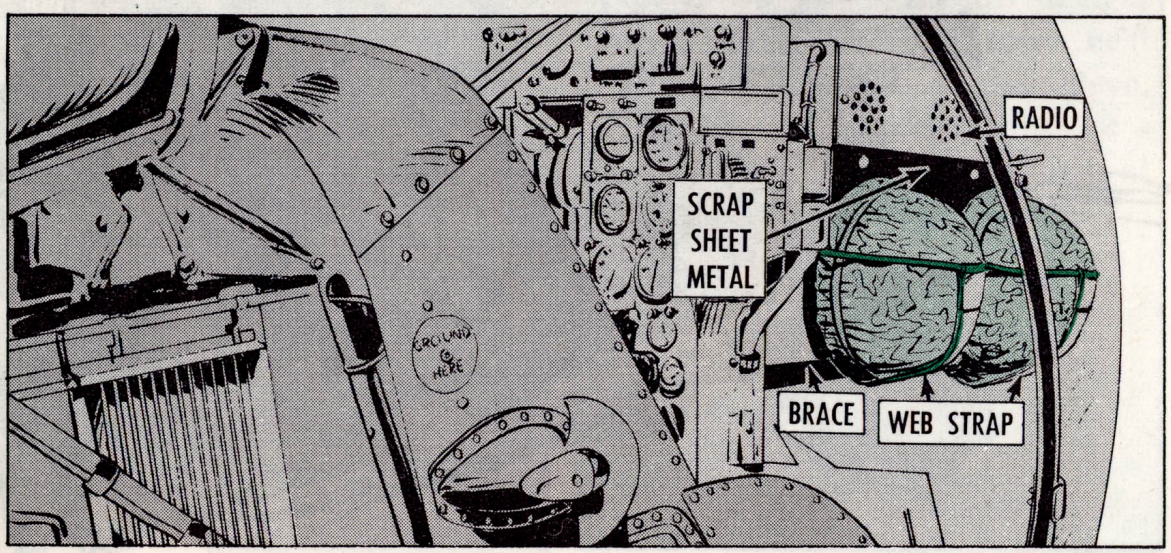
Get a little too much bend in the flexible lines of your Sioux (OH-13) hydraulic boost system and it's apt to show up in the cockpit — in the form of cyclic control distortion.

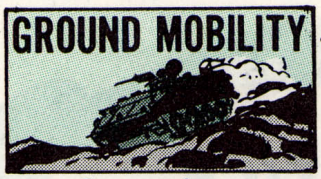
This feedback can show up as either lateral or fore-'n-aft movement and can throw the pilot off considerably — particularly if he's hoverin'.

By loosening the bolts through the irreversible valves, and moving the valves in the direction that will take out any kink in the lines, you can correct this situation. Be sure to tighten the nuts when you've got the right bend in those lines, though.

STRAC HAT TRICK

Sioux (OH-13) cockpit space has never allowed for anything more than room enough to put your feet down. So STRAC types have a choice of holding their combat helmets in their laps while wearing the flight hardhat or . . . whomping up a STRAC fix like this after asking permission from Big Six.





TO KEEP YOUR SCOUT SCOOTIN'...

KNOW THE KYCPHOI AREAS

So you're a crewman on an M114 or M114A1 command and recon Scout?

Well, pat your back and call yourself "Lucky!"

There's a lot for a good M114 crewman to know including where the KYCPHOI areas are.

The KYCPHOI areas (Keep Your Cotton Pickin' Hands Off It) are places you let your unit or support mechanics worry about.

Some M114-series engines have been failing just because crewmen tampered with the governor or changed the ignition timing. This caused overspeeding that ruined the engine.

So just relax and you won't get caught in the cracks. Let the mechanics do this job . . . they need the work.

Company mechanics have their KYCPHOI areas, too. They change the ignition timing if needed, and they check the way the carburetor governor works . . . but they don't adjust the governor.

GROUND MOBILITY

TO KEEP YOUR SCOUT SCOOTIN' . . .

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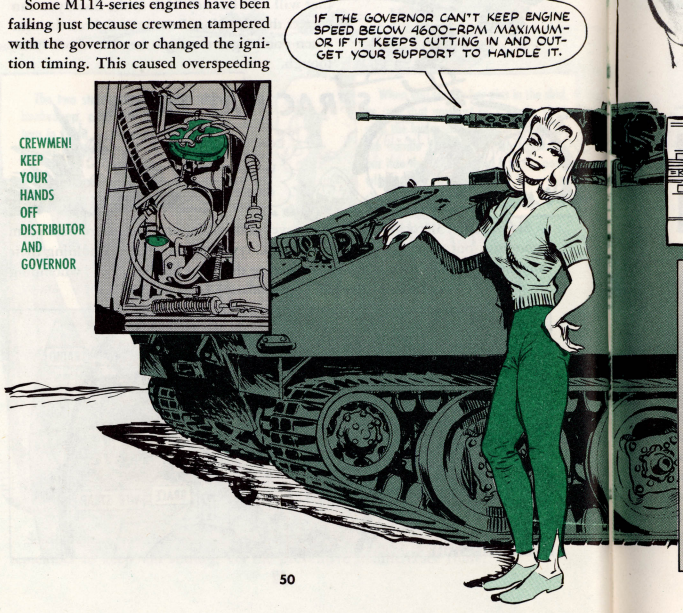


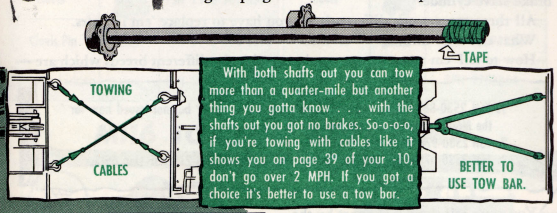
M114 OR M114A1 SCOUT

FIRST KNOW THEN TOW SLOW

Geared steer units on some brand new M114 series vehicles have been getting busted because the vehicles were towed wrong.

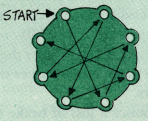
To keep your geared steer in good health you gotta know how far to tow. This distance is a quarter of a mile and not a foot more. If you're trying to tow-start and the towed vehicle won't fire up within a quarter-mile, something else is wrong so call loud and clear for your company mechanic. If your M114 is broken down and you're getting her home, don't tow over a quarter-mile unless the axle shafts are pulled first.

The mechanic will pull the shafts and see to it that the splined ends are protected by tape against banging around or crud getting into them. Also, he will use tape or rags to plug both hub holes to keep dirt and stuff out.



When the mechanic puts back the axle shafts after towing he'll spread a thin coating of sealing compound, FSN 8030-656-1426, around the flange area on the sprocket hub. This sealer is listed on page 70 of FSC C8000-IL (Apr 65). If he can't get this compound, at least he'll make sure the axle shaft cover and hub mating surfaces are clean.

When the mechanic installs the eight screws on each axle shaft cover, he'll get a snug fit and then cross-tighten, tightening up each screw a little at a time until he gets a final tightness of 110 to 120 pounds-feet.



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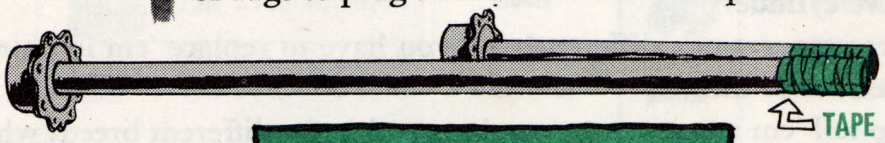

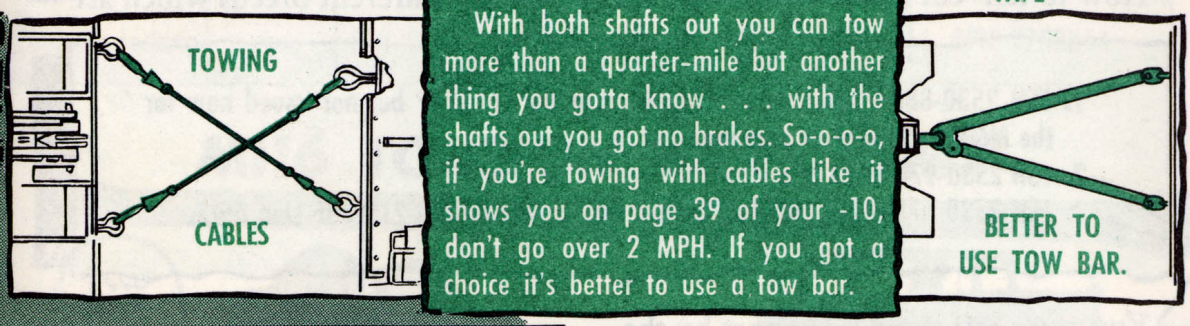

With both shafts out you can tow more than a quarter-mile but another thing you gotta know . . . with the shafts out you got no brakes. So-o-o-o, if you're towing with cables like it shows you on page 39 of your -10, don't go over 2 MPH. If you got a choice it's better to use a tow bar.

When the mechanic puts back the axle shafts after towing he'll spread a thin coating of sealing compound, FSN 8030-656-1426, around the flange area on the sprocket hub. This sealer is listed on page 70 of FSC C8000-IL (Apr 65). If he can't get this compound, at least he'll make sure the axle shaft cover and hub mating surfaces are clean.

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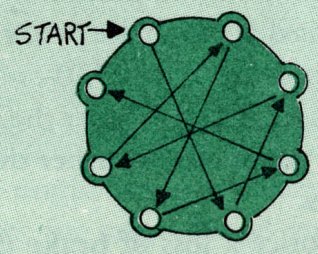
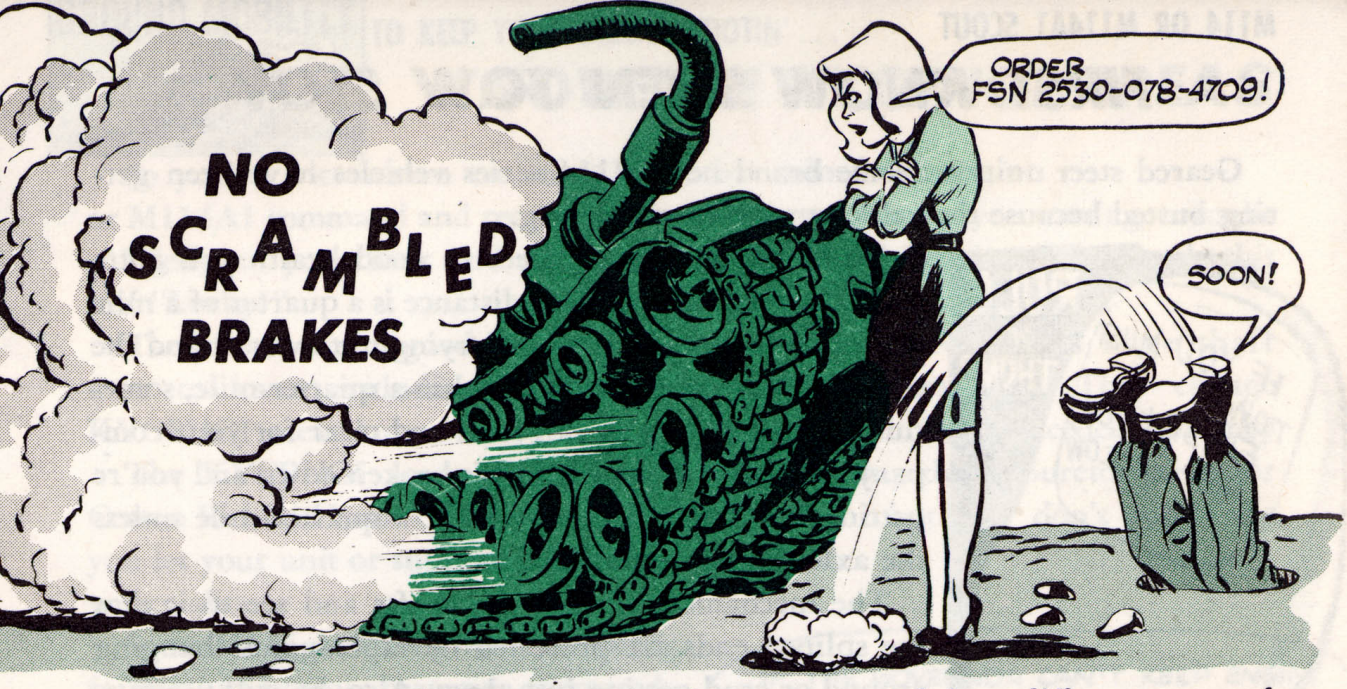




How about that M60A1 tank? It can have any one of three different types of brake slave cylinders.

All three types work differently so you have to replace 'em in pairs.

What else is to know?

How to tell 'em apart so you won't scramble the different breeds which are —

1. FSN 2530-888-9406 (10911967), listed in the old -20P but not issued now for the M60A1. So color it scratched out.
2. FSN 2530-974-9674 and
3. FSN 2530-078-4709, listed on page 2-163 of TM 9-2350-215-20P (Jan 65).

You can't tell these two apart by the cylinder housing because they both have the same one, marked 10916168. In fact, they are identical except that 3. has a bigger spring than 2. The 3. brake cylinders were put in all M60A1's with serial number 2988 and higher.

For replacement cylinders order the 3.'s and put 'em on in pairs only.

If you need a repair kit, your direct support can order FSN 2530-866-9387 (5703516). This kit includes the bigger spring and you use it on either the 2. or 3. cylinders.

If you notice a loss of brake fluid in the master cylinder and you can't find any leak in that area, possibly the leak is at your slave cylinders. You can check by taking out the plug in the bottom of the brake housing attached to each side of the transmission, like it says in TM 9-2350-215-20 (Feb 65) on page 2-312.

Any tow bar clevises missing from your M88 tank recovery vehicle's OEM?

You should have two sets aboard — one that'll hook your tow bar to tank-type track vehicles, and another for vehicles like the M113 and M114.

The tow bar clevises are shown on page 134 (item 13) of TM 9-2320-222-10 (Nov 60). If you need any replacements order 'em like this . . .

HEAVY DUTY		
Clevis		FSN 2540-589-6391
Clevis Pin		FSN 5315-200-8376
Clip, Pin locking		FSN 5315-708-7811

MEDIUM DUTY		
Clevis		FSN 2540-863-3153
Clevis Pin		OPN 10894254
Clip, Pin locking		OPN 7752864

M116 TORSION BAR TERMS

You all twisted up trying to get the right FSN's to order torsion bars for your M116 cargo carrier?

Well, relax in the flax . . . the numbers are:

FSN 2530-060-1123, torsion bar, suspension, left hand (10914917)
FSN 2530-060-1124, torsion bar, suspension, right hand (10914918)

You might want to remember these numbers for page 95 of your TM 9-2320-223-20P (Jul 62).

BOOT COMES ALONE

Now you can get just the top dust boot for the gear shift lever on your M151 ¼-ton truck instead of the whole kit, which includes several other boots you may not need.

The top boot, identified as Item 2.2 on page 69 in TM 9-2320-218-20P (Dec 63), comes under FSN 2520-678-3008.

This boot gets a lot of action, so it usually has to be replaced more than the others. You can still get this boot and others in one kit, tho, by FSN 2540-887-1343.

M151 HEAD BOLTS

Dear Half-Mast,

What gives with these M151 ¼-ton truck headbolts? When tightening down on the bolts after replacing a head gasket, I find the threads stripping on the No. 1 and 2 center bolts. They can't take the 60-65 lbs-ft torque called out in TM 9-2320-218-20.

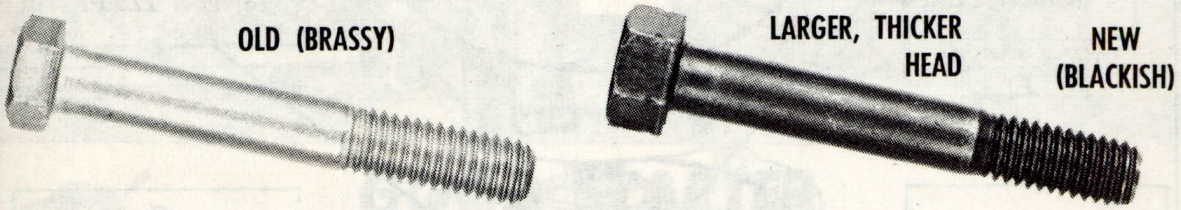
How can I keep 'em from stripping?

SFC J. L. M.

Dear Sergeant J. L. M.,

You need new headbolts.

Those old brassy colored bolts can't stand the gaff. For this reason, a stronger bolt using the same FSN (5306-088-8091) is being issued for the job.



You'll be able to spot the new headbolt because of its darker (blackish) color and larger and thicker head.

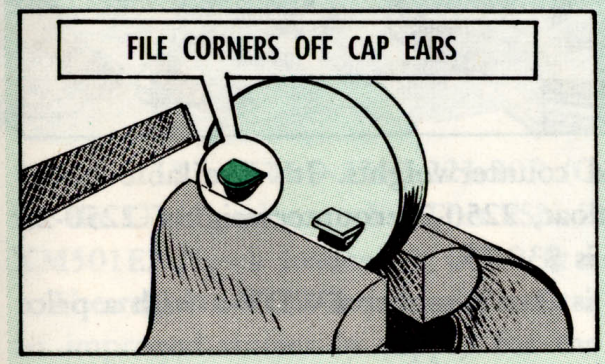
This new headbolt can take the 60-65 lb-ft torque that's needed.

When installing this new bolt put it on **minus** the washer.

Half-Mast

GRABBY GAS CAP

A few swipes with a file will take the sharp corners off your M151 ¼-ton truck's gas cap ears. Then you can slide out without leavin' part of your britches and maybe part of something else — behind.



You don't have to file those tabs clean off the cap — just enough to dull 'em. Cut down to about ⅝-inch high with about ⅛-inch off the corners, and round 'em.

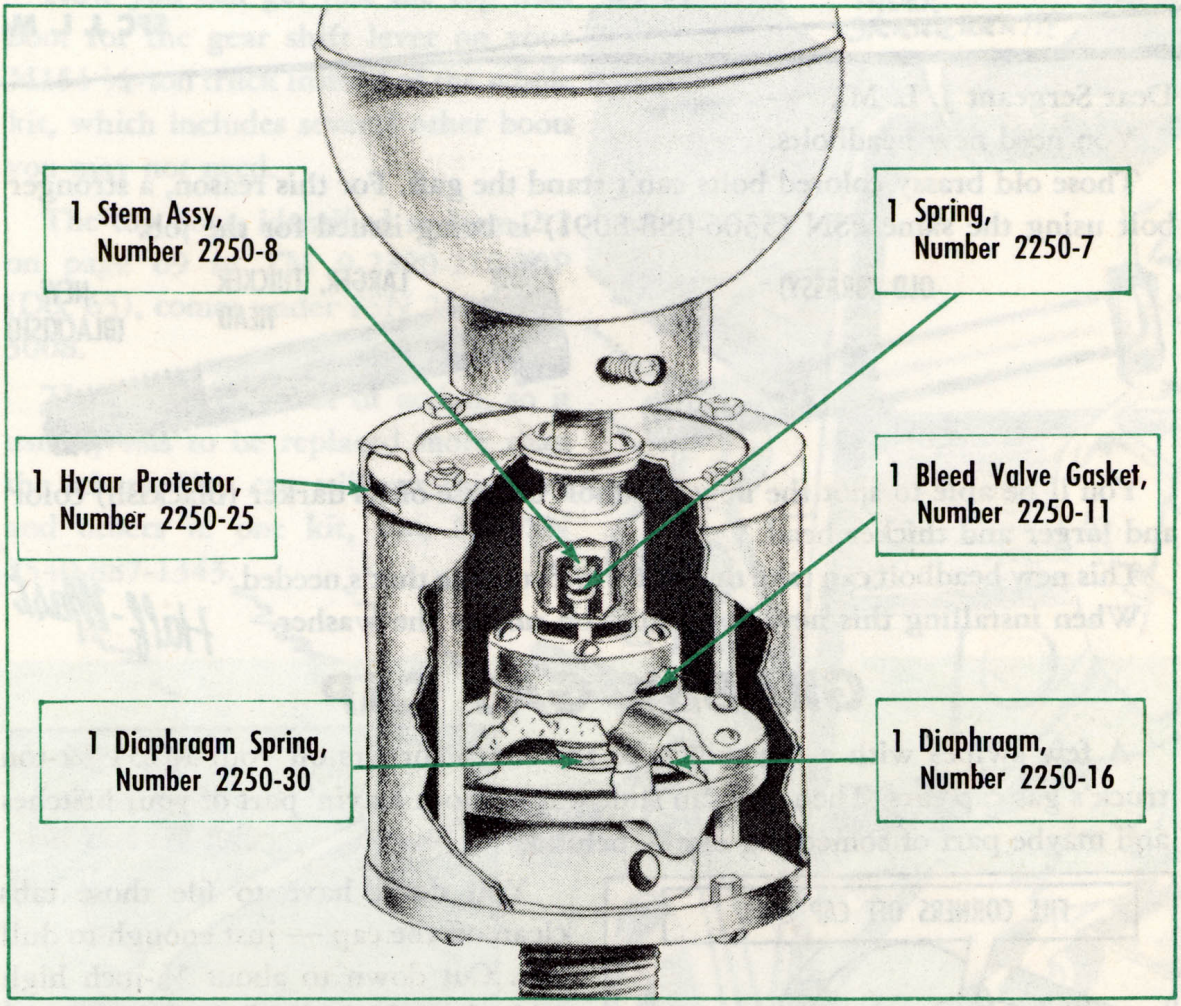
It's best to hold the cap in a vise when you're workin' on it so you only hit what you want to hit.

Then, how you position the cap on the tank opening makes a difference, too, in how grabby it is.

VALVE KIT AVAILABLE

Need replacement parts for the automatic dump valve in your M49C tank truck's fuel segregator? They're making their way into the supply system but they're not there yet. Meanwhile, there's a commercial kit you can get.

It can be bought from the Warner Lewis Company, Box 3096, Tulsa, Oklahoma under Warner Lewis Number 2250-K. It's priced at $12.32 (FOB Tulsa, Oklahoma) and contains the following parts:



The float assembly includes float and counterweights. It's available under Warner Lewis Part Numbers 2250-1 float, 2250-27 counterweights, 2250-23 screw and 2250-31 set screw. The price is $39.75.

The complete automatic dump valve is Part Number EWDV-a with a price tag of $68.85.

Your support supply people can purchase the items under AR 715-30. This AR authorizes them to buy civilian type off-the-shelf items.

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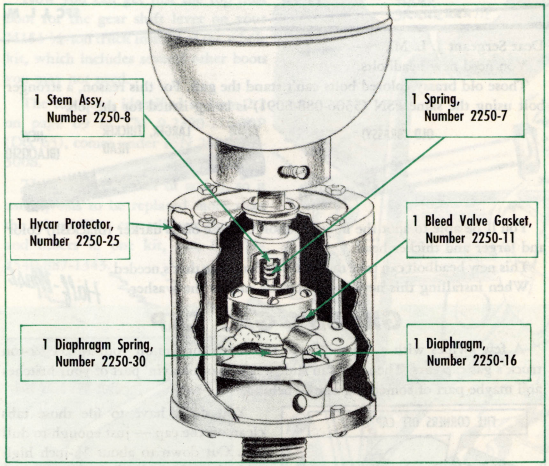

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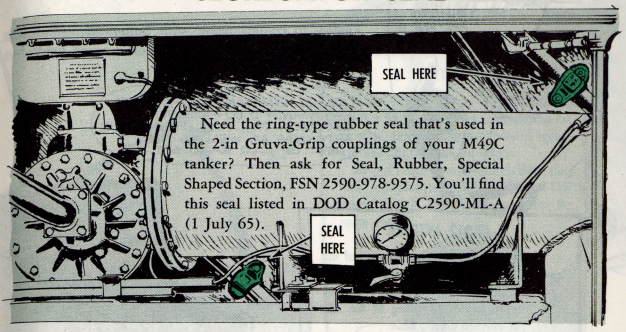
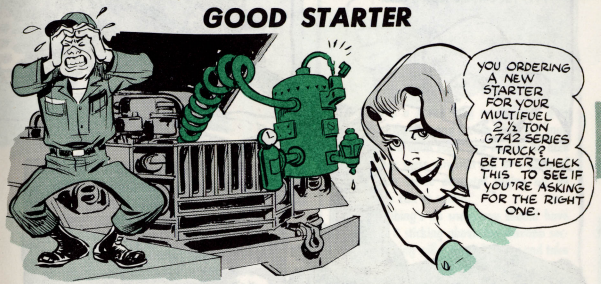


Need the ring-type rubber seal that's used in the 2-in Gruva-Grip couplings of your M49C tanker? Then ask for Seal, Rubber, Special Shaped Section, FSN 2590-978-9575. You'll find this seal listed in DOD Catalog C2590-ML-A (1 July 65).

GOOD STARTER



Page 233 in TM 9-2300-223-20P (Oct 64) lists starter FSN 2920-860-2353 for the G742-series trucks. This FSN is only for the starter that fits some G293 XM501E2 Hawk loaders; it won't fit any 2½-ton truck.

The regular G742-series truck starter is on page 235 of the TM. But there's an improved starter in supply for the M35A1, M49CA1, M50A1, M109A1, M275A1 and M292A1 trucks; it's FSN 2920-763-2346. Check out your starter requisitions to be sure you'll get a starter you can use.

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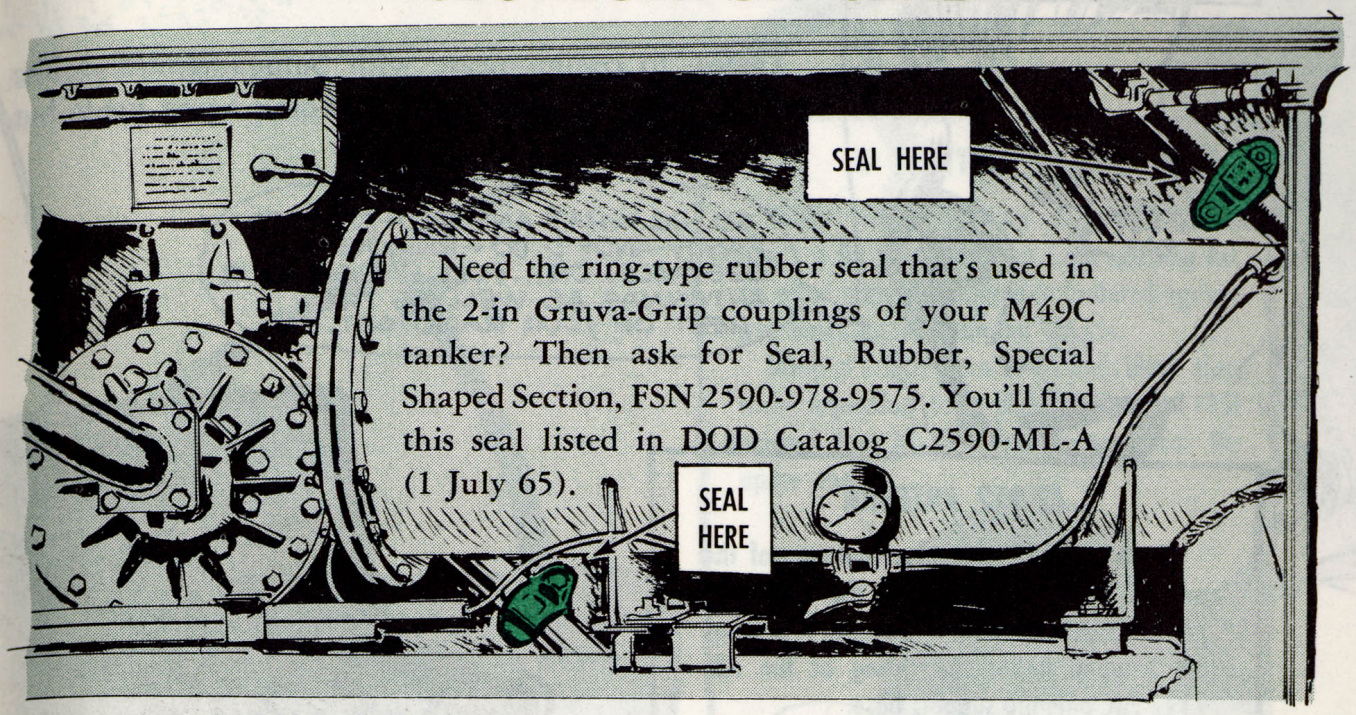

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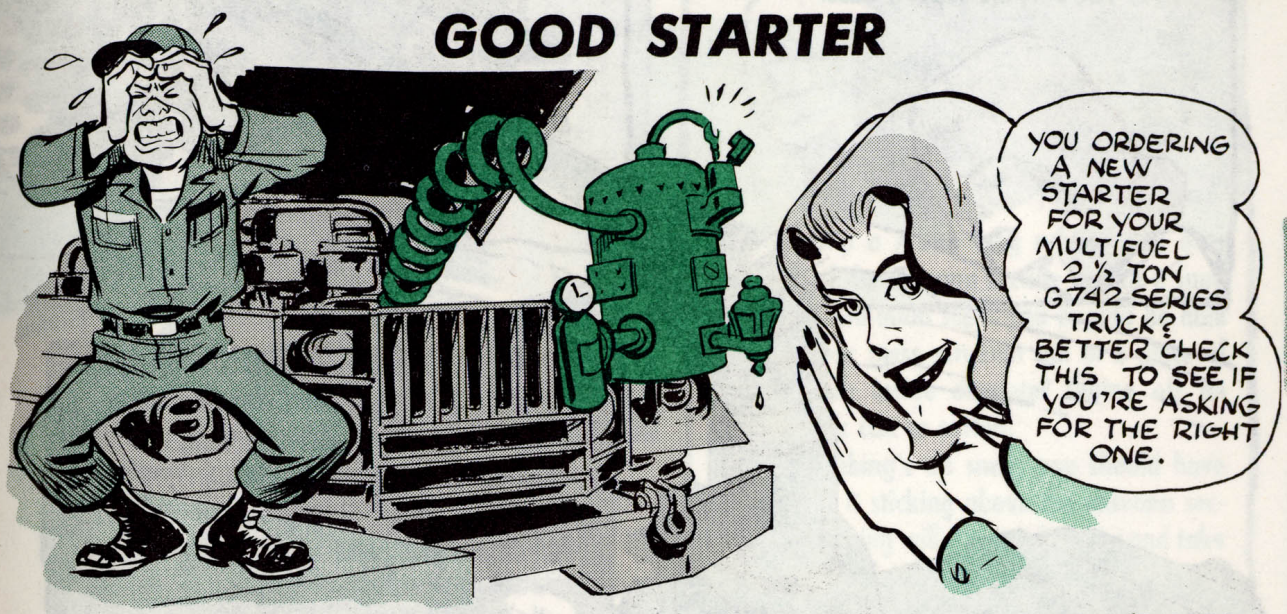

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KEEP IT CLEAN . . . OR

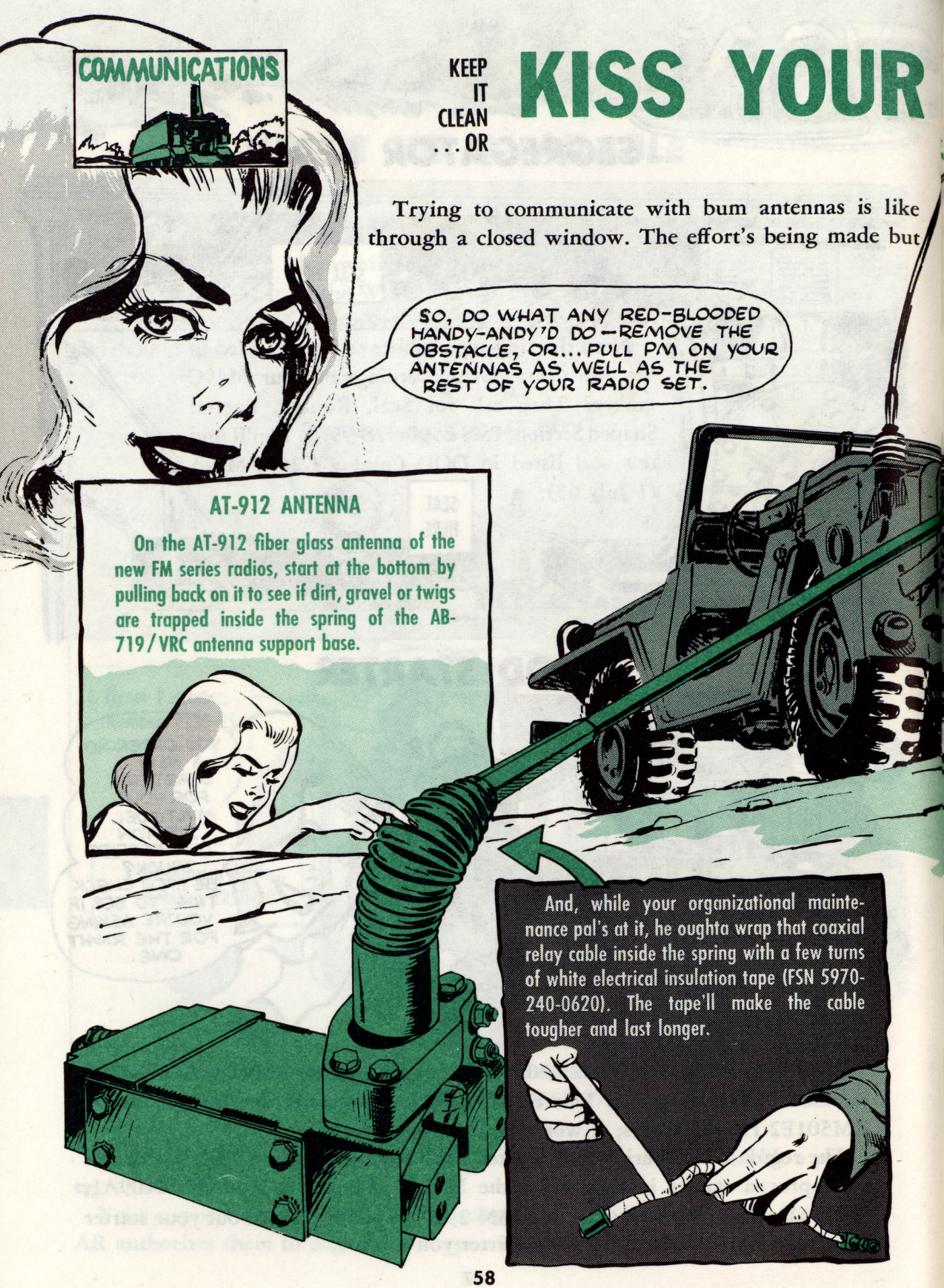
KISS YOUR

Trying to communicate with bum antennas is like through a closed window. The effort's being made but

SO, DO WHAT ANY RED-BLOODED HANDY-ANDY'D DO—REMOVE THE OBSTACLE, OR... PULL PM ON YOUR ANTENNAS AS WELL AS THE REST OF YOUR RADIO SET.

AT-912 ANTENNA

On the AT-912 fiber glass antenna of the new FM series radios, start at the bottom by pulling back on it to see if dirt, gravel or twigs are trapped inside the spring of the AB-719/VRC antenna support base.



And, while your organizational maintenance pal's at it, he oughta wrap that coaxial relay cable inside the spring with a few turns of white electrical insulation tape (FSN 5970-240-0620). The tape'll make the cable tougher and last longer.

COMMUNICATIONS

KEEP IT CLEAN ... OR

KISS YOUR SAD SIGNAL GOODBYE

Trying to communicate with bum antennas is like kissing your best gal through a closed window. The effort's being made but the message isn't gettin' through.

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Keepin' the dirt and dust off of the antenna element connections lengthens the antenna's life and knocks shorting out. After cleaning, a dab of silicone grease (electrical insulating compound) around the threads of the AT-1095 antenna section'll cut down freezin' between the AT-1095 and AT-1096 elements.

By the way, your organizational support can get a 2-oz (FSN 5970-224-5277) or 8-oz (FSN 5970-224-5276) tube of the compound out of DoD catalog C5970-IL-A, dated 1 Aug 65.

Leave your AT-912 up in the wide open spaces. But—tie it down (and leave it down) in power line areas or anywhere it might bash overhead obstacles.

TIP SPLITTING STOPPER

While you're high up on the antenna, here's a fix that'll stop 'er from splitting her tip when banged, bumped or battered against tree limbs or low-hanging objects.

Wrap a 2-inch piece of ¾-inch black electrical insulation tape (FSN 5970-296-1175) around the AT-1095 six inches from the upper end.

Then slip a 7-inch long rubber tube over the end of the antenna section and fit it snug over the insulation tape. You oughta be able to talk your mess sergeant out of a piece of the ⅜-inch inside diameter tubing off an empty milk can or carton.

If the tubing's on snug, you should have an inch of it sticking above the antenna section. The tubing will act as a bumper and take a lot of the beating aimed at the antenna.

AB-15/GR ANTENNA

You'll need to double up on your PM if you have an AB-15/GR antenna for that R-442 receiver.

(PS) MORE

SAD SIGNAL GOODBYE

kissing your best gal
the message isn't gettin' through.

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While you're high up on the antenna, here's a fix that'll stop 'er from splitting her tip when banged, bumped or battered against tree limbs or low-hanging objects.

Wrap a 2-inch piece of ¾-inch black electrical insulation tape (FSN 5970-296-1175) around the AT-1095 six inches from the upper end.

Then slip a 7-inch long rubber tube over the end of the antenna section and fit it snug over the insulation tape. You oughta be able to talk your mess sergeant out of a piece of the ⅜-inch inside diameter tubing off an empty milk can or carton.

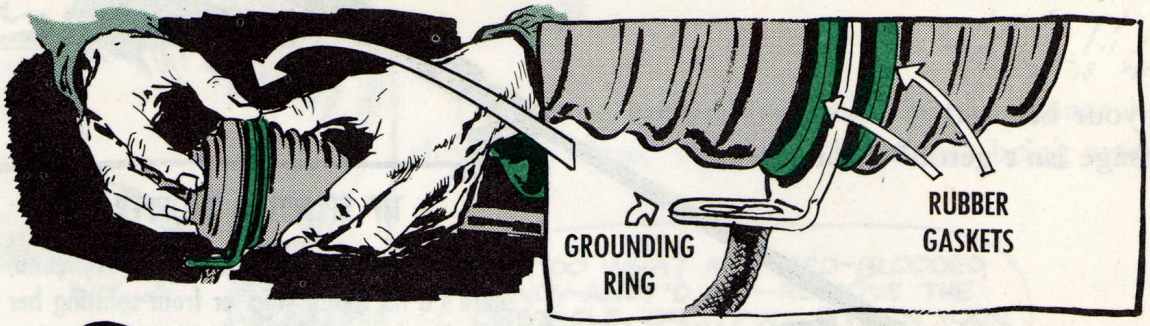
If the tubing's on snug, you should have an inch of it sticking above the antenna section. The tubing will act as a bumper and take a lot of the beating aimed at the antenna.

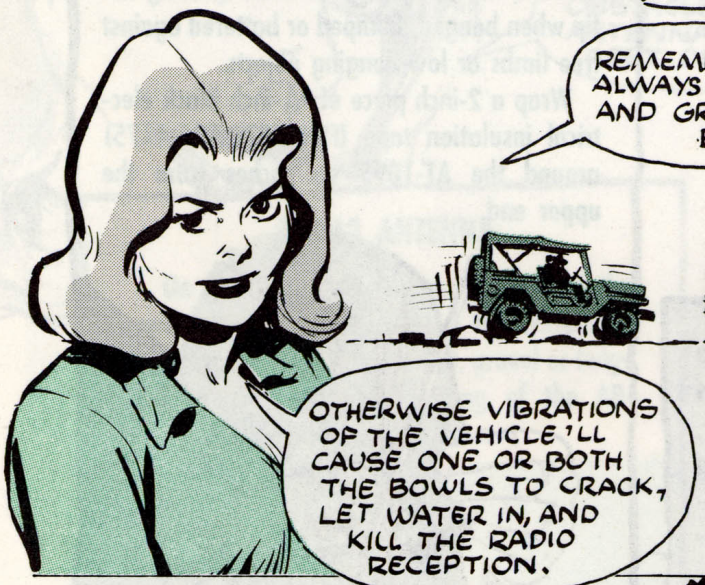
AB-15/GR ANTENNA

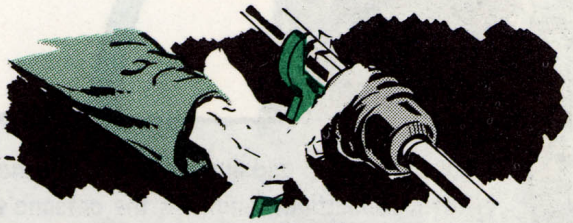
You'll need to double up on your PM if you have an AB-15/GR antenna for that R-442 receiver.

P.S. MORE

It's no sweat, though, if you keep those screw threads on the MS-116A, -117A, and -118A sections clean and lightly coated with silicone grease. The grease'll help keep the sections from freezing together.

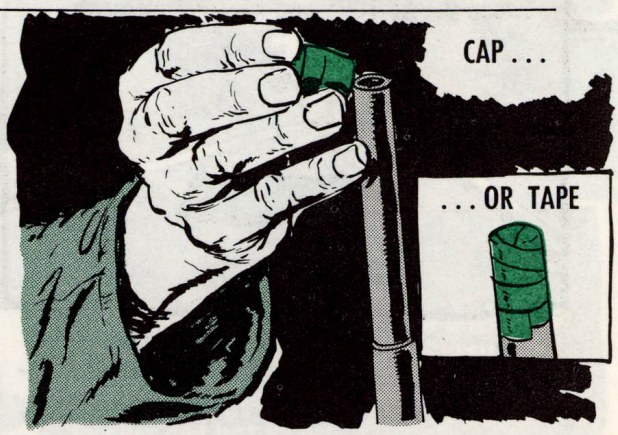


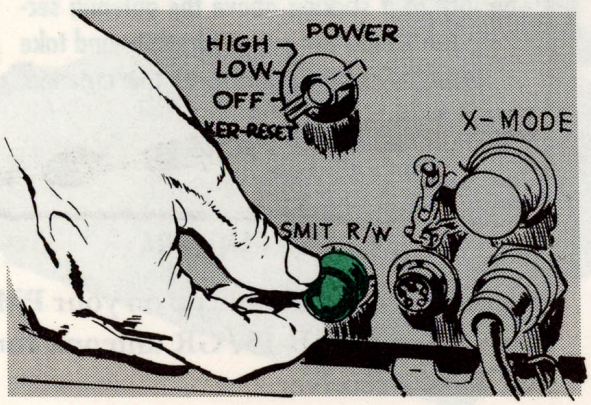




Another thing that'll make those bowls crack up is a repairman using a wrench or pliers to screw the base section together. Hand tight is tight enough.

Also, when the antenna sections are down and out of the base, slip the antenna base cap (FSN 5820-264-9213) over the rubber sleeve of the base section. In case you're fresh out of a cap, seal off the end of the sleeve with a piece of tape until you get another cap.





A good place for stowing that little old cap when your antenna's up is over one of the mike connectors of your RT-246 or RT-524 receiver-transmitter or audio connectors of your R-442.

Last, but not least, keep an eye peeled for low hanging objects and you'll savè a lot of woes.

BRAND NEW... ALL NEW, LINE ITEM NUMBERS

You heard right. It's here at last. A single, simple line-item numbering system for all Army equipment.

The new system starts from scratch, and gives an item a line-item number, which will stick to it throughout the life of the item.

This means that authorization documents (TOE's, TDA's, etc.), property records and supply status reports (AR 711-5, AR 711-140) will all use one and the same LIN for any item. The same LIN may also apply to maintenance records (TM 38-750) at a later date.

The big changeover is effective when DA Headquarters gives the word — so watch for a circular on its implementation.

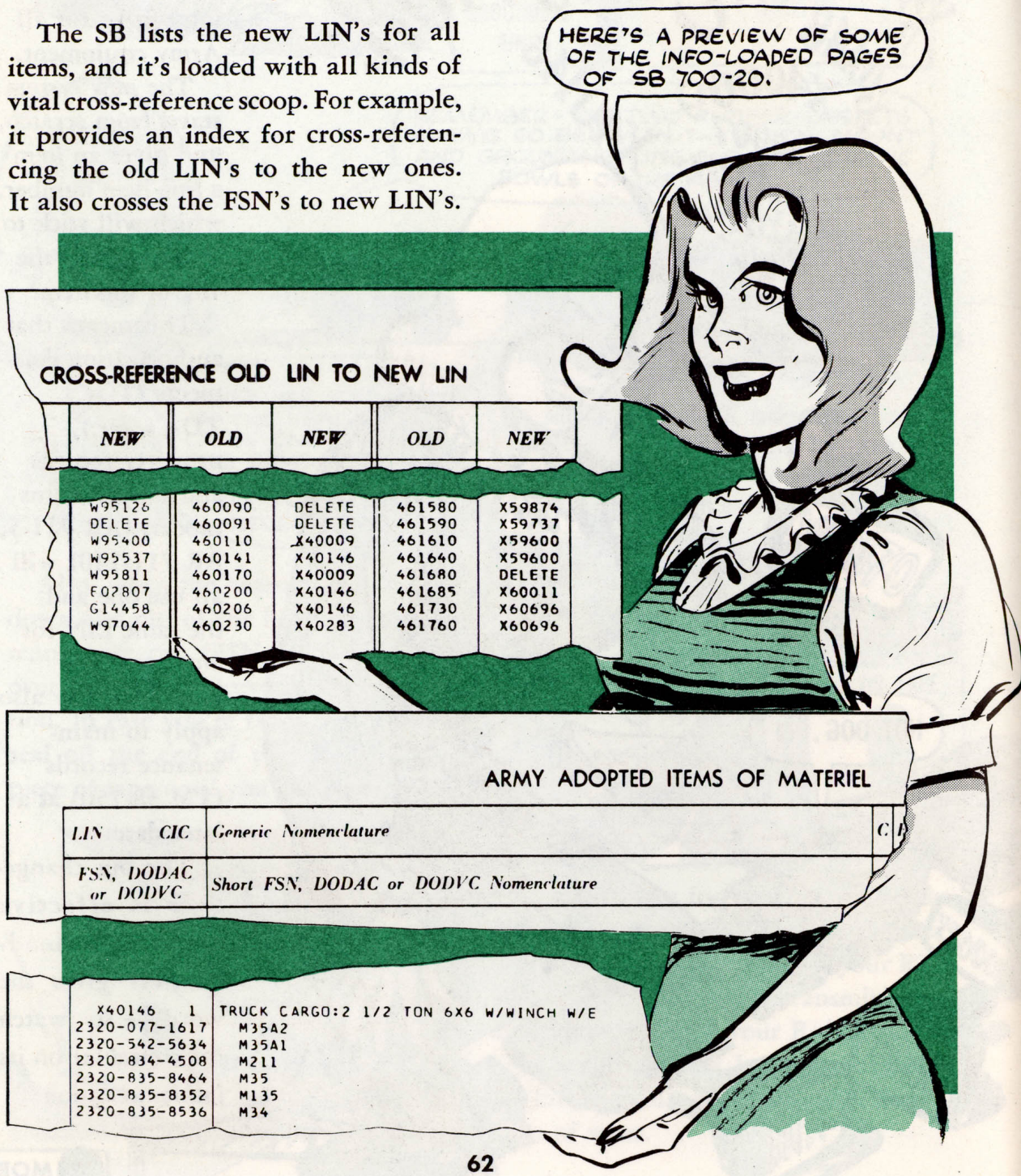
P.S. MORE

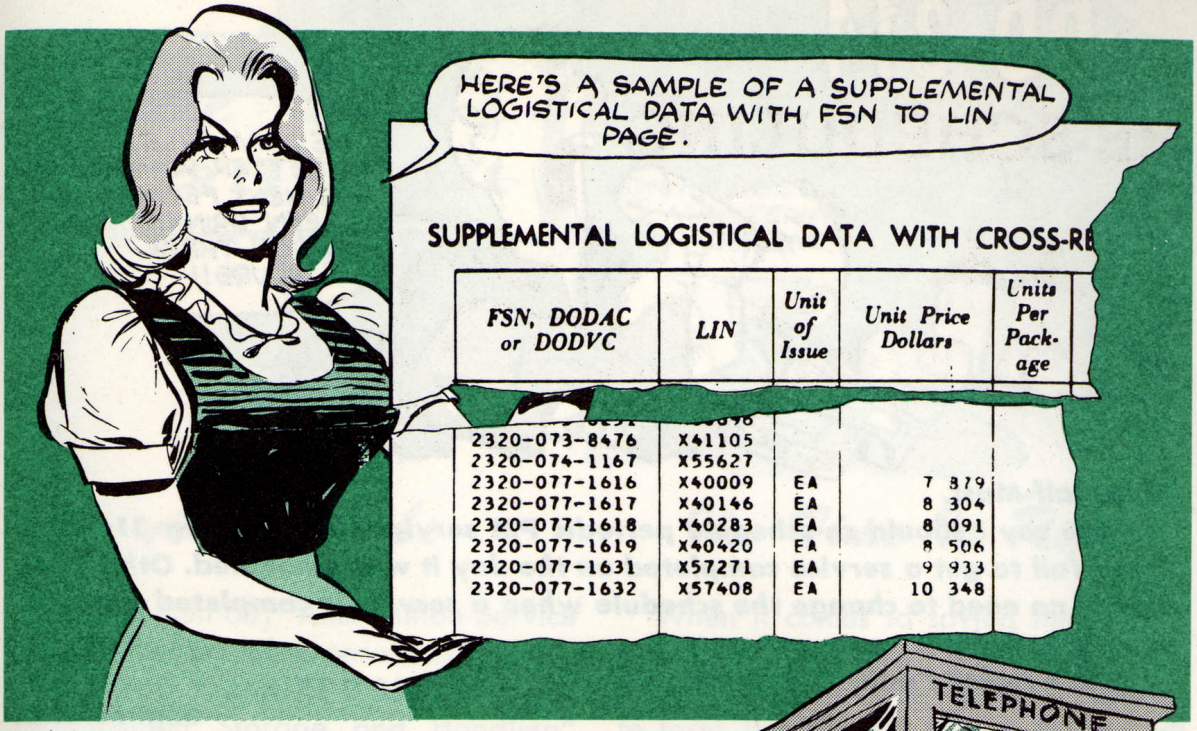
Most likely . . . you'll be working the new LIN's gradually and changing your records according to your local SOP.

But, your big Buddy in the change-over operation is SB 700-20 (June 65). If you didn't get it thru pinpoint distribution, you'd best order copies right away on DA Form 17.

Then, to make sure you get future changes or revisions on pin-point, grab a copy of DA Form 12-34 and write the number of copies your outfit will need in the block marked "DA List of Adopted Items."

The SB lists the new LIN's for all items, and it's loaded with all kinds of vital cross-reference scoop. For example, it provides an index for cross-referencing the old LIN's to the new ones. It also crosses the FSN's to new LIN's.





NEW LIN MAKE-UP

The new numbering system uses a basic six character line-item number which is made up of one letter and five numbers.

The numbering series runs in sequence, like so:

A00001 TO Z99999

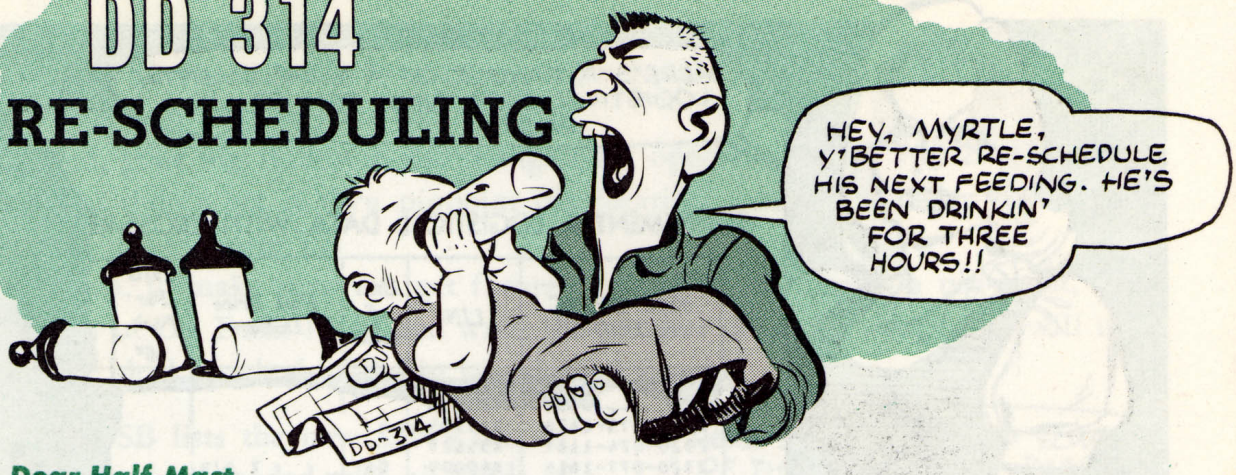
Simple as that.

The only letters it skips are I and O. This is so in data processing the cap I won't get mixed with the figure 1 and the 0 with the zero (0).

The new system allows equipment listings and records to be easily set up in alphabetical and numerical sequence.

Eventually, of course, all the new authorization documents (TOE's, TDA's, etc.) will show only the new LIN's, but until the documents are revised, get yourself a copy of the new SB and hang on to it . . . 'cause until the old system is completely up-dated you'll be living mighty close to the new SB.

DD 314 RE-SCHEDULING



Dear Half-Mast,

Some say I should re-schedule periodic PM services on DD Form 314 each time I fail to get a service completed on the day it was scheduled. Others say there's no need to change the schedule when a service is completed a day or two early or late.

Who's right? I'm in a haze on this.

SSgt M. T. C.

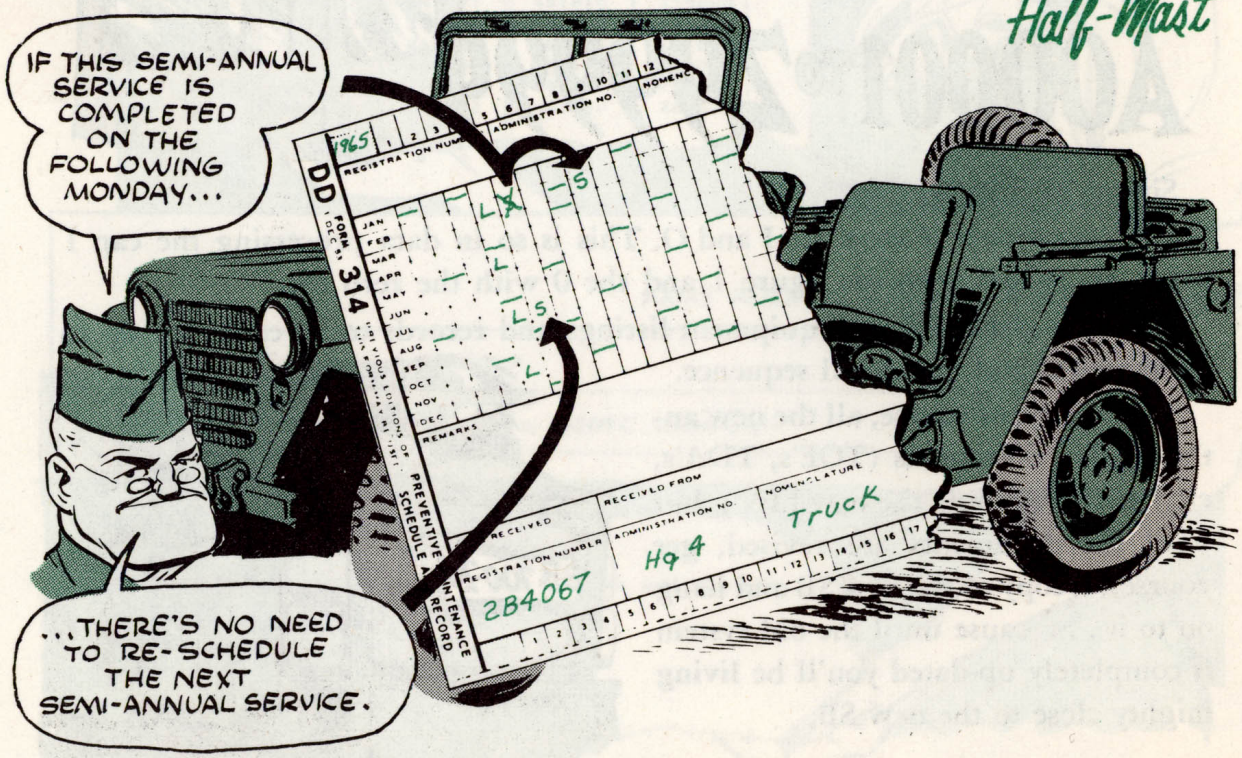
Dear Sergeant M. T. C.,

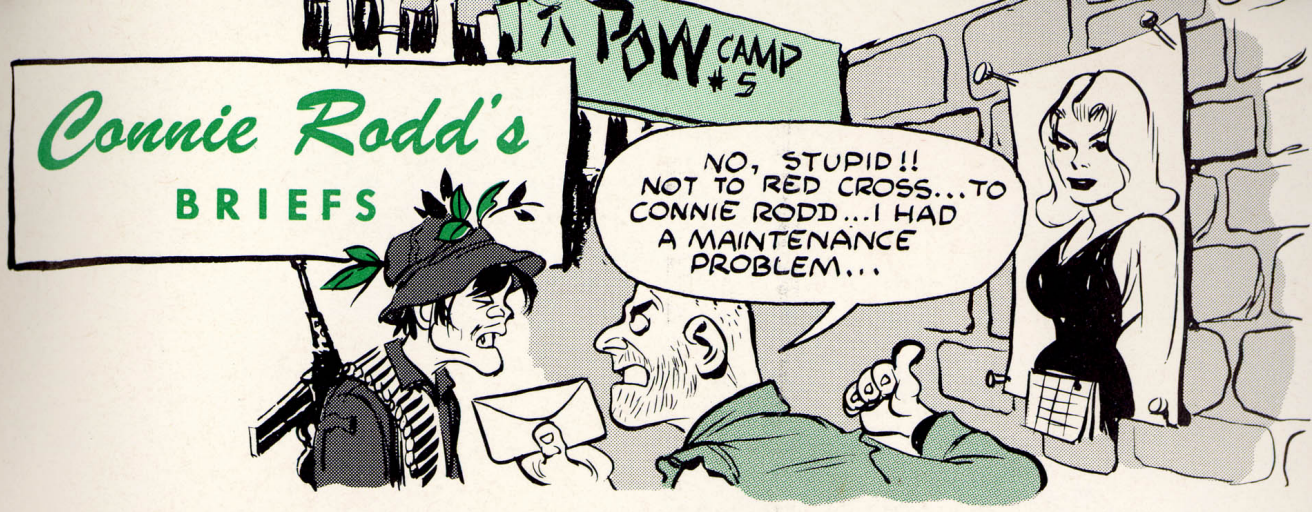
Just keep within the rule in para 3-3c(5) of TM 38-750, and don't turn yourself into a whirligig in a whirlwind.

As long as the service due is completed within the allowable 10 percent variance (early or late), just leave the next service scheduled as-is.

If a scheduled service is advanced or delayed more than 10 percent because of emergency or other special conditions, then re-schedule the next service due.

Half-Mast





Ammo Pubs

FM 9-6 (Jun 65) "Ammunition Service in the Theater of Operations" superseded FM 9-5. And, TF 9-3568 (Apr 65) "Ammunition Storage and Handling" has replaced TF 9-2120. Make a note of these changes in the list of ammo pubs on page 20, of PS 153.

LVCT Movie

You can increase your low-voltage circuit tester know-how with TF 9-3536, "Low Voltage Circuit Tester." The 25-minute black and white film explains the construction, use and care of circuit testers you're authorized to use. Get it from your local audio-visual aids section.

What's The Score?

When rating your Beaver (U-6) according to TM 55-1510-203-20ESC take an automatic 10 points on the generator until it's taken out of the ESC. The generator's not a time change item, sure 'nuff. That's the poop in DA Message 731561 (9 Sep 65).

The Time Is Ripe

When it comes to saving time, nothing beats SB 9-228 (8 Feb 65)—and you supply types don't have a moment to lose! The SB says until 8 Feb 66 all unserviceable wrist watches, non-maintainable, FSN 6645-952-3767, are to be returned through supply channels to Frankford Arsenal, Philadelphia. There, the engineer types can give 'em a going over to see how they can be improved. They need all the watches they can get. The SB gives you the details and the address.

M151 Closure Kit

New M151 ¼-ton trucks that did not get curtains and doors as part of their Basic Issue Items (OEM), can get them as outlined in SB 9-16 (Feb 65). This SB OK's using soft-top closure kits in areas where the average winter temperature is +40° to +5°F . . . when authorized by (WAB) your command. When ordering the kit, doors or curtains, use the FSN's given in Change No. 1 (Mar 65) to TM 9-2320-218-20P (Dec 63).

Would You Stake Your Life *right now* on the Condition of Your Equipment?

WHY NOT TALK IT OVER WITH TH' 'OLD MAN' ABOUT GETTING EVERY PIECE OF EQUIPMENT ASSIGNED TO SOMEBODY FOR OPERATION AND MAINTENANCE.